JOURNAL

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EDINBURGH NATURAL HISTORY SOCIETY
COUNCIL
at January 2008

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EXCURSION COMMITTEE

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The Edinburgh Natural History Society was originally founded in 1869 and incorporates the Edinburgh Field Naturalists and Microscopical Society, instituted in 1881. The Society was instituted for the study of natural history in all its branches, and for the encouragement of public interest and concern in these matters.

An indoor talk is held on one Wednesday every month from September to April, in the Guide Hall, 33 Melville Street at 7.30pm. Posters of date, time and topic are in all libraries. All are welcome. Outdoor excursions are held throughout the year. A copy of the programme for Summer 2008, and details of membership of the Society can be obtained from the Secretary.

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THE PRESIDENT'S THOUGHTS

Whereas the excursions will always remain the life-blood of any society of naturalists, it is our journal which records these personal and collective experiences and enables us to recall and revisit those memories which fade with time. We look forward each year with great expectation to opening these pages: to read of the interests of others who for long may have been hiding their light under a bushel; to reminisce about, or to regret what we missed, from indoor and outdoor meetings; and to be further delighted by prose, sketches and photographs. Together with all contributors, Sandra and Lyn are to be congratulated. The volume of work involved in editing can only be guessed at. They have given us all yet another volume destined to be loved and well thumbed.

I was pleased to be asked to be president and am tempted to review why I found it to be such a privilege. Initially the genial nature of your welcome and the richness of the programmes on offer were what attracted and endeared me to the Society. Even when the proceedings are at times esoteric, we are embraced by thoughtful clarification within the broader backdrop. Another reason for the vitality of the Society is that most endeavours are a product of communal effort even though the identity of many contributors may remain unsung.

As I begin my term I need to pay tribute to those who have stepped down from office this year. Natalie Taylor brought youth and enthusiasm to her presidency. Meetings were conducted with self-effacing humour and calmness. Margaret Perry has performed quietly and efficiently, organising the winter lecture programme for several years. We welcome Julia Macintosh as her replacement. Roger Holme, always a tower of strength, was unable to continue on the Council because of the pressure of work. His expertise was invaluable in the establishment of our web site. We must also thank Ian Macintosh for the recent updating of the web site. We are grateful to all of them. As always, you are asked to look forward to identifying future office bearers who will be needed to fill roles in the years ahead. I am confident that they will be forthcoming.

Neville Crowther

OBITUARIES

GRAHAM SWIFT

Graham, who died early last year, joined the Nats in 1983. He soon became involved in leading excursions, sometimes two or three times a year. Through his work at the Bush he had many farming connections and found interesting areas for our outings. Grasses was his subject and he often used evening walks to pass on his knowledge. In the 1990s he was an active member of the Excursion Committee, and later of the Council. Even after he stopped coming out , he showed an interest in our excursions, offering ideas for new venues.

Lyn Blades

JOSEPH CARLYLE 1910 - 2008

Joe joined the Society in the early 1950s. He was a very good, self-taught botanist and mycologist. He had lived in 'The Ferry' all his life and earlier on, when it was a village, he had been the Burryman. He enjoyed and knew the surrounding countryside in great detail. He was a regular leader on excursions and we enjoyed his quiet sense of humour, and the knowledge he imparted to us.

I have memories of Joe attempting to land on Inch Garvie against the tide; of scrambling on the rocks above Loch Brandy, searching for rare alpines; and quite recently, of finding Butterfly Orchids.

Connie Stewart

A KIND DONATION

Thanks to an exceptionally generous donation, the donor wishing to remain anonymous, the Society has been able to purchase a laptop and data projector for use at its indoor winter talk meetings. The possibility of purchasing this equipment has long been a discussion point at Council meeting, but it has always been decided that the expense was not justified. However, with more and more people using PowerPoint for their slides, and several not having their own equipment, it was clear that this purchase was becoming essential.and our kind donor wanted to remedy this situation . Our new equipment was used for the first time at the indoor meeting on Wednesday 20 February, by Philip Mason. Council would like its appreciation made known to the donor for this very kind and thoughtful donation.

ABERLADY NATURE RESERVE

We are pleased to introduce Aberlady's new Warden, John Harrison

MY CAREER IN CONSERVATION SO FAR

Originally from West Yorkshire, my career in conservation began in a back garden in Otley, making bird feeders, tables and boxes. I left Otley in 1996 to spend four years at Aberdeen University, joining the ranks of the infamous (but sadly now defunct) Aberdeen University Bird Club. In 2000 I served my apprenticeship as a volunteer at the Loch of Strathbeg Nature Reserve, where I got my first paid job. In 2001 I spent half a year in New Zealand, part of which was on an island reserve in the Hauraki Gulf looking after New Zealand Dotterels, and killing off a myriad of introduced species of plants and animals which have blighted the country.

Returning to Britain, I took a job at the Dee Estuary in North Wales and the Wirral, working for 2 years on a 5,000-hectare coastal and freshwater reserve (supporting over 100,000 birds); and managing a 24-hour Little Tern protection scheme. In 2004 I moved to Oxfordshire to work for two years on an arable reversion project, converting carrot and wheat fields into a thriving wetland. I started at Aberlady Bay in late January of 2006 and, a year in, I am thoroughly enjoying the post. There is much to occupy my time at Aberlady, including an exciting new grazing project, relentless Sea Buckthorn control and various survey and monitoring work, particularly of less-known non-avian taxa.

ABERLADY'S GEESE - IN THE PINK

John Harrison

There is something about a big skein of flying geese that make people, even those who claim not to have a great interest in natural history, stop and fall silent. Whether it is the evocative sound that stirs something quite primeval within us, or whether we are in awe of the sheer mass of birds and the cacophony of sound in coordinated flight, who can say. But these birds do have a special place in our hearts, and amid troubled times for many of our bird species, they are a pleasing conservation success story.

Pink-footed Goose is amber-listed, because more than 50% of its population is restricted to ten or fewer sites, and more than 20% of the North-West European population occurs in Great Britain.

A Global Context

The Pink-footed Goose *Anser brachyrhynchus* has the most restricted breeding distribution of all of our grey geese, but is by far the most common winter goose in Britain. The species has two distinct populations: one which breeds in Iceland and eastern Greenland, and the other in Svalbard. The Svalbard population is the smaller of the two, numbering around 35,000 individuals in 1999. These birds migrate through Norway and Denmark in the autumn, wintering principally in The Netherlands and Belgium. There are a small number of records of ringed Svalbard birds in Britain, but there is no evidence to suggest that these birds regularly winter here. The much larger Icelandic/Greenlandic population (more than six times larger than the Svalbard group) winters almost exclusively in Britain, which makes the larger British roosts of these geese internationally significant. The 2006 census of wintering Pinkfeet in Britain estimated a population of 229,123, well down on the previous year's estimate of 302,774, the first time the population has been recorded at over 300,000*.

* It is unlikely that such a difference between the two years is genuine, given weather conditions and breeding success in 2006, and figures, particularly that for 2006, can be regarded as under-representative of the population. In some years, some significant roost sites can go un-recorded.

The Changing Fortunes of Pinkfeet

The Pink-footed Goose (or 'Pinkfeet' as they're more affectionately known) has undergone a rather remarkable population increase over the last forty to fifty years. We know from the writings of the Bishop of Skálholt, Gisli Oddsson in 1638, that birds bred then in Iceland in the summer, although we don't know in what number. I think it is fair to say though, that the breeding population was fairly insignificant until the early 1900s. From British records, it is presumed that the species was uncommon before the twentieth century although we cannot be certain, due to its similarity and confusion with Bean Goose.

Estimated population of wintering Pink-footed Geese in Britain

1950s	30,000
1960	<50,000
1980s	100,000
mid 1990s	250,000
1999	225,000
2003	280,998
2005	302,774
2006	229,123

By the 1950s, estimates put the British wintering population at around 30,000 individuals. Over the next 50 years, the population underwent an amazing ten-fold increase.

Wintering requirements of Pink-footed Geese

As with all birds, in winter the main preoccupation of a Pink-footed Goose is eating and sleeping. Roosting birds require open areas where they are relatively free from predation risk. Such sites take the form of open water bodies such as reservoirs, or as in the case of Aberlady, sheltered coastal bays. When it comes to feeding, saltmarsh was traditionally the favoured haunt of wintering Pinkfeet. However, changes in British agriculture since the 1960s, along with decreased shooting pressure following the ban on the sale of geese in the 1970s, and increased protection of roosts, have been the catalysts for the large increase in the wintering Pinkfeet population. The food of choice for the discerning Pink-footed Goose is now spilt grain on stubble fields, root crops after they have been harvested, cereal crops and grass. Consequently, the largest roosts of Pinkfeet are located where this food source is within close proximity to a safe roost site. Largely, the numbers on these traditional roost sites (in East Scotland, Lothian & Borders, Solway, and Lancashire) have remained the same, the most notable exception being the Norfolk population, which has grown from practically none in 1975 to in excess of 100,000 now.

The Aberlady Pinkfeet

In a national context, Scotland has two peaks in the number of its wintering Pink-footed Geese: firstly in late September and October as birds first arrive from Iceland, and again in March, as birds amass in North-East Scotland before making their return journey to Iceland. Pinkfeet in Scotland in October number around 200,000, with between 100,000 and 150,000 present through the winter and into the Spring. In the autumn, Scotland can support up to 95% of the world population of these geese in just ten sites, highlighting the significance of the nation and its major roosts for the species. One such key roost site is at Aberlady Bay, which can support up to 10% of the world population.

Aberlady Bay is very much an autumn site for these geese. The first birds arrive in mid-September, with an average arrival date of 9th (over last 10 years), but it has been as early as 30th August (1998) and as late as 21st September (1993). High numbers remain in November and into December; however, by mid to late January numbers have usually fallen below 1,000, after which numbers do not build again until the following autumn.

Unsurprisingly, numbers of Pink-footed Geese recorded at Aberlady Bay have mirrored the national trend. Peak numbers at the roost in 1974 were 2,500. By 1987 this figure had risen to over 15,000 and it rose yet further, reaching the maximum reserve count of 25,960 in 1993. Since then, numbers have exceeded 20,000 in 2002, 2004 and 2007.

Selected Peak Counts of Pink-footed Geese at Aberlady Bay Local Nature Reserve

1974	2500
1980	7200
1985	12,500
1990	17,500
1995	11,320
2000	16,750
2001	13,740
2002	22,200
2003	15,040
2004	22,070
2005	10,350
2006	18,310
2007	23,415

The number of geese at Aberlady can fluctuate greatly both from year to year, and from day to day. Following the maximum reserve count the previous year, in 1994 the peak number of geese was just 8,900 (an almost three-fold decrease). Similarly, in 2007 numbers peaked on 29th September at 23,415. Just four days later, this figure had fallen by 15,000. It is not fully known why there are such fluctuations, although it is almost certainly a combination of factors. Harsh weather is known to cause large movements of geese away from a site, often resulting in them not returning again that winter. Food availability close to roost sites is an important factor, with an abundance of available food enabling birds to stay longer. Radio-tracking studies in North-East Scotland showed that individual Pink-footed Geese had feeding ranges of 21-69 square kilometres, although there were distinct core areas of feeding activity. Site fidelity to fields that provide good, relatively undisturbed, feeding opportunities every year can be very high. If sufficient food is hard to come by, geese are known to feed out during the night, particularly on moonlit nights. Consequently, there can be variance between dawn and dusk roost counts. It is also known that there can be significant movement of birds between roost sites in a limited geographical area. Colour marking of Pink-footed Geese in North-East Scotland showed that they changed their roost site, on average, every 10 nights, visiting over three different roost sites. Aberlady birds are known to change roost site to Fala Flow (Mid Lothian) and West Water (Borders), but it is not greatly understood to what extent they do this.

What the future holds for Pink-footed Geese

It is highly unlikely that numbers of Pinkfeet in Britain will continue to rise so dramatically, and indeed they have levelled out in the last decade or so. It is clear that the success of the species is closely linked to farming activities in Britain. Changes in the farming industry (e.g. in sugar beet), the re-legalisation of the sale of geese, climate change (e.g. by making more breeding habitat available in Iceland) are some of many potential causes for both positive and negative changes in the number of Pinkfeet visiting Britain in the winter. While the future is uncertain, the species is certainly enjoying a boom time at the moment. Long may it continue.

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Follow John's story of a Gosling's adventures elsewhere in this Journal !

THE DANCING MOTH - *Adela reaumurella*

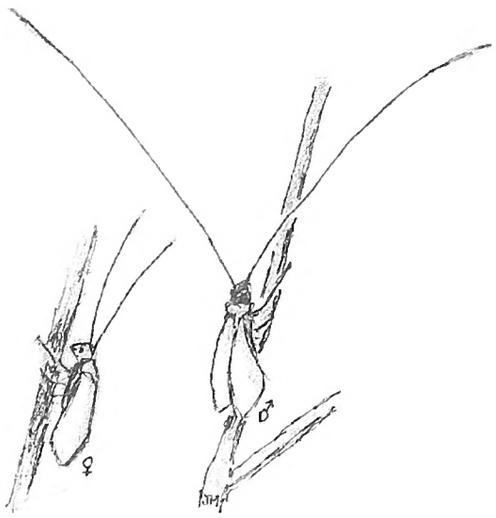
Jackie Muscott

I had two views of these amazing little micromoths this year. The first time was on 19th May during the Nats trip to Fountainhall. It was very windy, but in a sheltered corner we came upon a number of these moths on a bush, and occasionally taking to the air. The next day I was out with the Lothian Recording Group in Currie Wood, and we had a splendid view of the insects 'lecking' by a sheltered Willow in the river valley.

Adela is less than 1 centimetre long, but the males in particular have antennae several times the body length, with club-shaped tips, and on fine days they dance on the sunny side of a sheltered tree or bush, to attract females. The sun glints and flashes on their wings and the tips of their antennae, and if it goes in they sink back into the vegetation until it shines again.

Apparently the eggs are laid on trees such as Oak and Birch, and the caterpillars mine the leaves before falling to the ground, where they continue to feed on leaf litter, making themselves little houses out of leaf fragments. They don't pupate till the spring.

Later in the year, on 11th June, I saw similar insects with long antennae resting on rushes by the edge of a fishing loch near Parkley Place, but these turned out to be Caddis Flies, and they don't dance!



THE DANCING MOTH
Adela reaumurella

IS SHE INNOCENT ? !

Margaret Little

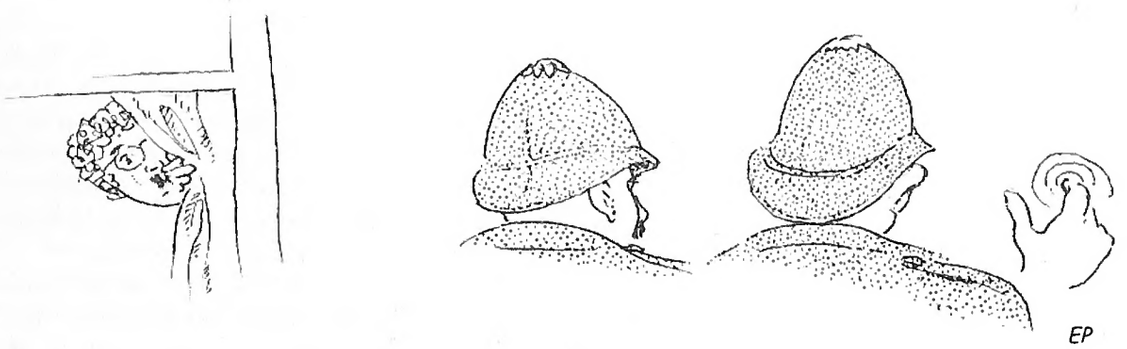
I was speaking to Connie Stewart on the phone and mentioned mysterious plants growing in my garden. She suggested I might write an amusing article for the Journal about them.

Here it is !

Below a bird feeder I found a huge number of seedlings which I had never seen before. The very pure seed mixture from the RSPB contained Canary Grass and Sunflowers, which I had already seen, leaving Hemp seed, and you all know what that is - Cannabis! My friends and family found it hilarious that I was growing illegal plants, but I had a good excuse. I was just an innocent old lady interested in botany and awaiting the flowers to see what they were; so I kept the two tallest plants. They grew and grew until they were over three feet tall, then I waited weeks and weeks for flowers to appear, just to be quite sure, although the plants looked exactly like pictures of Cannabis. Before you report me to the Police, please read on.....

When the flowers eventually appeared, I was astounded to see they were bright yellow, one and a half inches in diameter, and of the *Asteraceae (*Daisy) family. Connie, I know that you asked for an amusing article, but I fear that the laugh is on me for jumping to illegal conclusions. But what on earth had happened? I went to the book *Illustrations of Alien Plants,* and there on page 350 was a perfect picture of my plant, leaving me in no doubt that it was *Guizotia abyssinica.* Then I remembered piles of Niger seed on the ground, spilt from another feeder. I thought at the time that this tiny black seed, beloved by Goldfinches and Siskins, and native of East Anglia, could never germinate in a cold damp garden in Galashiels. Members who know me will be aware that I can no longer go out botanising, and here was the botany coming to me ! Better still, the *Atlas of the British Flora* showed that it was a first record for Vice County 79, and a second record for Scotland, so I felt slightly elated. But pride comes before a fall, and a letter from Douglas McKean at the RBGE Herbarium soon brought me back to earth with a thump. Apparently garden bird seed aliens are not included in the Flora ! Douglas also explained that the Herbarium has many specimens, mostly very old, dating from 1906 to 1913, but with ones from Elgin and Inverness in the 1970s, and most recently from Stirlingshire in 2002.

This is not the end of the story: at Christmas my son gave me a packet of Hemp seed. At first I thought it was a joke, and meant for the birds, until I read the instructions, which told me that the seeds were for human consumption and very good for you. I duly sprinkled them on my breakfast cereal. They tasted quite pleasant, the only trouble being that they tended to get under my denture, giving me sore gums. I thought of sowing some of the seed, but decided not to. Playing the silly old lady once was O.K., but a second time was pushing my luck ! So I shall probably never know what Cannabis looks and smells like. Of course I would never have dreamt of brewing up the leaves or whatever one does to produce the drug !!



A STRANGE PLACE TO FIND A CATERPILLAR

Lyn Blades

We were looking at Lichens on the cliff at the north end of Peffer Sands, when we were surprised to find a small caterpillar. This one had obviously 'read' Jim Porter's book *Caterpillars of the British Isles.* Its appearance fitted the description given, the habitat was right and 24th February could be spring, when feeding is said to recommence after winter hibernation. The animal was the larva of a Moth which is found throughout the British Isles - the Marble Beauty Moth. The larvae are apparently rarely seen, but are occasionally found fully exposed on or around their food plant, on this cliff *Xanthoria parietina*, after heavy rain, when the Lichen becomes saturated. We only saw one caterpillar, but there were several weblike structures in holes in the rock nearby, which we took to be the 'silken domiciles' in which the small larvae over-winter. The adult Moths fly from late June until early September.

RESTORATION OF NATIVE WOODLAND AT CARRIFRAN

by Philip Ashmole

It is just eight years since I wrote a piece on Carrifran Wildwood for the Journal. Then, the project had just had its single most important event: the purchase of the site and the start of tree planting on Millennium Day, 1st January 2000. Now we look out over the glen - optimistically coloured woodland green on the latest edition of the Ordnance Survey map - and try to imagine what it will be like when the 450,000 trees now growing there have reached maturity. Certainly there will be nowhere like it in the south of Scotland. Nowhere else among the denuded hills of the Southern Uplands has anyone tried to recreate the full spectrum of native vegetation appropriate to a glen in which the lowest point is below 200 metres above sea level and the highest above 800 metres.

Deciding what was the appropriate vegetation took a long time. In late 1997, as soon as we had signed our two-year option on the site, we organised a discussion meeting at the Royal Botanic Garden under the auspices of Edinburgh University and Borders Forest Trust. The title was *Native woodland restoration in Southern Scotland: principles and practice,* and 180 people including many of the best known names in Scottish forestry, ecology and conservation, as well as all the key members of the Wildwood Group, spent a long day considering the nature of the broad-leaved woodlands that had once clothed the Southern Uplands, and thinking about how some of them might be re-created.

Topics included the pollen record and its application to ecological restoration; historical analysis; the composition and structure of native woodlands; and the genetic constraints on restoration. We also discussed establishment techniques and heard accounts of several other relevant projects. In the talk relating specifically to Carrifran, I emphasised that we had already taken the fundamental decision to aim at the re-creation of 'original-natural' woodland, attempting to establish all (and only) the species of trees and shrubs that were present in the area prior to major human impact. We realised, of course, that there had been climatic changes in the past, and that the soils and the fertility of the site had changed as a result of human intervention, so that we could not simply turn the clock back. However, we reckoned that the altitudinal range and variety of conditions at Carrifran would allow us to accommodate nearly all of the species trees and shrubs which were present in the past.

During the following two years, the Ecological Planning subgroup of the Wildwood Group, led by forest ecologist Adrian Newton, used the insights gained from the conference and the continuing input from a wide variety of people as the foundations of a comprehensive plan for Carrifran.

The types of woodland to which we should aspire were deduced primarily by means of the Ecological Site Classification (ESC) system developed by the Forestry Commission, which is based on assessment of three principal factors which determine site 'quality': climate, soil moisture regime and soil nutrient regime. A National Vegetation Classification (NVC) survey of the open-ground vegetation had been carried out previously for Scottish Natural Heritage; this was supplemented by soil sampling in various parts of the valley by Muir Sterling, a postgraduate student at Edinburgh University supervised by Adrian Newton. The results were used as a basis for determining the appropriate woodland types for different parts of the valley.

We concluded that the low areas along the burn near the mouth of the valley could support diverse upland broad-leaved woodland (types W7 and W9 under the NVC classification) including species such as Alder, Ash, Wych Elm and Bird Cherry. The steep slopes forming the sides of the glen - where the soils are mainly poorer brown earths, and where there is much scree - were reckoned to be more suitable for upland Oak-Birch woodland of two types, W11 and W17. Both have dominant Sessile Oak and Downy Birch, along with Holly, Rowan and Juniper. W11 sometimes includes Aspen and has Hazel and Hawthorn as the main shrubs, but in W17 the latter two species occur only on better soils. On some high parts of Carrifran there is peat or peaty mineral soil and wet heath vegetation, usually with Purple Moor-grass, Deergrass and Cross-leaved Heath. These areas will support Downy Birch woodland with Alder and Willows (type W4), although getting trees established in the thick sward is often difficult.

When we purchased Carrifran there was a rather clear 'heather line' at an altitude of about 450 m. We decided to restrict our initial planting to roughly this level, though pushing up above 500 m in some areas. However we did have a special interest in the restoration of treeline woodland and montane scrub, which could potentially grow at higher levels and which had been extensively discussed at the 1997 conference. We decided that in general we should allow natural regeneration to create a semi-natural treeline zone on the highest slopes and the summit plateau, and we were pleased when we occasionally came across a seedling Rowan high up in the heather. However, we worried that progress would be extremely slow, given the hostile site conditions and the lack of suitable seed sources for most species. We therefore decided to try to give the process a kick start in a few places.

Natural treeline, a zone of stunted trees and low-slung woody shrubs, has been almost entirely eliminated from British mountains by a combination of burning and intensive grazing. The current absence of the habitat strengthens the case for attempts at restoration, but also means that there are few examples available as models.

Our site analysis suggested that under more natural conditions only the most exposed areas around the highest summits - White Coomb (821 m) and Firthhope Rig (800 m) - would have lacked woody shrubs and maintained small areas of montane moss-heath with prostrate Heather, Blaeberry and Crowberry.

From about 750 m down to the upper limits of our main planting it would be appropriate to recreate a treeline zone with dwarf trees and montane scrub. Juniper would probably be dominant, but it could be accompanied by Birch, Rowan and perhaps Scots Pine, forming woodland type W19. In some relatively calcicolous places there might be an opportunity to establish Willow scrub. Downy Willow survives naturally at the adjacent Grey Mare's Tail and can form a montane scrub habitat in association with Great Wood-rush, which occurs in large patches on exposed high slopes in the Moffat Hills. Dwarf Cornel, extremely scarce south of the Highlands, occurs in some of these patches, and additional Montane Willow species may also be appropriate elements of this habitat.

With these possibilities in mind, we began planning the restoration of montane scrub at Carrifran as soon as the end of our main planting was in sight. At some time in the future we shall work in Rispie Lairs, a high bowl under Saddle Yoke, on the western boundary of the site, but for the moment we are concentrating on Firth Hope, a hanging valley above the waterfall, Firthhope Linn. This site has an altitude of 600-750 metres and is exposed to the prevailing winds. Forestry Commission data suggest that is close to the climatic limit for growth of trees and shrubs, making it an ideal place for a pioneering trial of the re-establishment of a semi-natural treeline.

A year ago Scottish Natural Heritage approved the plan for Firth Hope, under which wide unplanted areas are to be left around the botanically rich flushes that are scattered in various parts of the extensive and relatively uninteresting grassland, mostly dominated by Mat-grass. In early February 2007, after numerous postponements caused by unfavourable weather, we managed to get a helicopter lift of 3000 plants and a heavy load of equipment up into Firth Hope. Most of the planting was achieved during three high-level weekend camps by hardy volunteers in February, April and May. This year we hope to plant a further 5000 trees and shrubs in Firth Hope.

The genetics of the trees for planting at Carrifran has always been a preoccupation. For each species we have collected seed from stands as close as possible to Carrifran, and with comparable site conditions, in an attempt to ensure that the planting stock will readily establish in the glen. We also aim to collect seed from many trees within each stand (so as to encompass the full genetic variability in the population) and to collect from a number of different stands, so as to guard against the possibility that some small relict stands might be inbred and thus genetically impoverished.

Maximising genetic variability within our new populations ensures that even if some individuals within the planting stock turn out to be unfit for the places where we plant them, others will be better suited. Since the mature woodland will anyhow have far fewer trees than the 1600 per hectare that we plant, there is likely to be an adequate number of well adapted individuals.

Genetic variability can also serve another purpose. In the 1990s, when we planned the woodland restoration at Carrifran, climate change was generally viewed as a small cloud above a distant horizon. Nonetheless, we realised that we should not only aim to plant trees that were adapted to the situation here and now, but should try to maximise the resilience of the populations towards the physical impact of changes such as raised temperature or reduced rainfall, and the biological challenges of unfamiliar pests, pathogens and competitors.

High variability will allow the populations to evolve adaptively in the face of change, since genes conferring the ability to cope with the new conditions will increase in frequency over the generations. Nonetheless, a high rate of environmental change may still prove challenging because of the long generation time of most trees and shrubs. The high relief of Carrifran will mitigate this problem, since it offers a chance for populations to shift gradually uphill if lower areas become unsuitable for them. By our treeline planting, we hope to give them a good start; we already have Oaks growing above 450 m, about as high as any in Britain.

The potential impact of climate change is underlined in a report by the Forestry Commission, *Climate change and British woodland.* by Broadmeadow & Ray (2005) which used the *Ecological Site Classification* that formed the basis for our planting plans to model the effect of predicted change by 2050 on the growth of trees and their potential distribution in Britain. Type W11 upland Oak-Birch woodland is one of their examples and the maps show a markedly reduced number of suitable sites in England and Wales. In South-west Scotland, sites at higher elevation remain suitable, but lower ones are less so.

However, climatic changes that truncate the southern range of some species will in principle enable them - and perhaps others - to expand northwards, and could make conditions at Carrifran suitable for some species that have never grown on the site. However, northward movement takes time, and some ecologists worry that the pace of climatic change may outstrip the ability of some trees (and other sedentary plants and animals) to keep up with the northward movement of the zones offering them suitable conditions. We might therefore consider whether to plant a few southern species at Carrifran. The most obvious possibility is Small-leaved Lime *Tilia cordata*, which seems to have its northern limit as a native tree in the south of the Lake District (where it reaches a surprising altitude of 600 m.).

Warmer temperatures should enable it to set seed further north and it might then be suitable for the richer parts of Carrifran, where Ash and Wych Elm already flourish.

Ecological restoration at Carrifran is made possible by the support of people who care about the natural environment of Scotland. Four fifths of the funds for the purchase of Carrifran valley came from private individuals, and the rest came from charitable trusts. We have been lucky in gaining some support from the Forestry Commission and Scottish Natural Heritage for the main planting at Carrifran, but we could not have progressed so far without the help of those who become participants, either as Stewards of Carrifran Wildwood or as regular contributors. We are now facing the laborious and expensive business of establishing trees and shrubs at high altitudes, for which grant aid is not available, so we are actively seeking support from members of the public. Full information is available on the project website **www.carrifran.org.uk** (which is currently being redesigned).

Further reading:

Ashmole, P (2006) *The lost mountain woodland of Scotland and its restoration*. Scottish Forestry 60 (1), 9-22.

Chalmers, H (2007) *Ecological restoration without all the pieces*. Early news from Carrifran. ECOS 28 (3/4), 89-94.

Broadmeadow, M & Ray, D (2005) *Climate change and British woodland*. Forestry Commission Information Note 69, 16pp.

Stott, A (2007) Climate change adaptation and biodiversity policy in Defra. ECOS 28 (3/4), 9-17.

Many thanks to Neil Bennett for allowing us to reproduce his 'war-room' cartoon, and also to the Editor of ECOS, in which it originally appeared. We were given it by Philip Ashmole.

We are happy to support the Carrifran project by enclosing their leaflet with your Journal. Eds.

MOSSES AND LIVERWORTS AT KINDROGAN

Maren Flagmeier

Thanks to a grant from the Edinburgh Natural History Society, I was able to extend my knowledge of Mosses and Liverworts (Bryophytes) by attending an identification course run by Martha Newton at the Field Studies Council Centre at Kindrogan, from the 30th June to 5th July 2007.

I feel especially lucky to have been able to attend this course because it fitted well into my overall training as a Bryology apprentice. As one of six BTCV (British Trust for Conservation Volunteers) Natural Talent apprentices for 2006/07, I have been learning about the wonderful world of Mosses and Liverworts. Funded by the Heritage Lottery Fund, these apprenticeships were developed to train specialists in conservation and ecological skills. The Bryology apprenticeship is mentored by Dr David Long from the Royal Botanic Garden Edinburgh, and will last 18 months. During this time my aim is to improve my Bryophyte identification skills, as well as developing further my Bryophyte survey skills.

By the start of the Kindrogan course, I had already enjoyed several months at the Royal Botanic Garden Edinburgh studying Bryophytes, and was excited to find out where Martha Newton would be taking us, and which new species, especially those of the limestone areas, we would see.

Rain was present basically every day that week; there were however less rainy, slightly rainy, medium rainy and other distinctions to be made ! Nevertheless this could not keep us from wandering around outside, especially as Bryophytes are most happy and lush when they are wet. The first day was spent around Kindrogan, taking in all the common species. Although these were not completely new to me, it was great to hear some in-depth descriptions of their characteristics, as well as more aspects of their physiology and ecology. For example, we learned that the relatively common moss *Plagiomnium undulatum* hardly ever fruits in Britain because it has very specific climate and habitat requirements. The 'tiny' of the day was probably the liverwort *Lejeunia cavifolia* whose oil bodies had to be checked microscopically to identify this species correctly.

The Sunday took us a bit further afield, to Glen Shee, where we made our way to Loch Beanie. The first conspicuous find of that day, even if it is the commonest upland *Grimmia*, was *Grimmia donniana*. The sight of the tiny grey cushions with abundant capsules delighted some people, but others less; they were however memorable. After concentrating on acidic rock species it was great to find a more base rich flush area along the Allt Mor, between Shee Water and Loch Beanie. Seeing Quaking Grass *Briza media* was even able to distract me briefly from the Bryophytes, being such a pretty sight. It, however, is also a good indicator of richer ground, and consequently we found *Palustriella falcata*, *Plagiobryum zieri* and *Philonotos calcarea*.

The next day was officially devoted to the genus *Sphagnum,* and after a very useful introductory session in the lab, aimed at how to decide which Section the encountered *Sphagnum* should be placed in, the task ahead seemed less daunting. We visited Culponach Moss, near the Forest of Alyth in Glen Shee and saw 13 *Sphagnum* species, including the less common species *S. fuscum* and *S. austinii*. We learned how the different colourations of these plants can also be a pointer to species identification, even though colour can be quite subjective. The highlight of the day was probably seeing *Hamatocaulis vernicosus* in a mesotrophic flush, as it is a nationally (Wildlife and Countryside Act 1981) and internationally (Annex IIb of EU Habitats Directive 1992) protected species. Although it is not as rare as this protection status might suggest, it is a beautiful sight, with hooked shoot tips and sometimes a red colouration.

The last three days of the course gave us an insight into the Bryophyte-richness of more calcareous areas. Schiehallion near Kinloch Rannoch, Glen Tilt and Glen Doll brought to our attention amongst many others: *Tortella tortuosa*, *Pseudocrossidium revolutum*, the pretty *Entodon concinnus* and *Scapania aspera*.

Over the course of the week *Scapania* became named by the students as the 'midnight genus' since on one particular occasion the attempt to identify one taxon to species level resulted in a very long night in the lab. In general, the evenings were filled with microscopic identifications, fuelled by excellent cake provided by the centre. On our final day we also added to our list two more *Sphagna*, namely *S. inundatum* and the nationally scarce *S. platyphyllum*.

Overall it was a very interesting course, which has helped me re-enforce my identification skills of the common species , and also learn some of the Scottish specialities of the limestone areas. I would like to thank the Edinburgh Natural History Society for its support in enabling me to attend this course.

FIELD NOTES/KEY TO COMMONER BRITISH *SPHAGNUM* SPECIES

The following notes were taken by me on Martha Newton's Bryophyte course. The aim of the key/notes is to aid identification of the commoner British *Sphagna*. There is no claim that the 'id' tips are complete and for satisfactory identification and learning purposes, both field and microscopic characters should be considered. For the key to work it is essential that the questions are answered in order. Once a *Sphagnum* section has been identified, work through the descriptions sequentially until a match is made.

How about trying the key to identifying some *Sphagna*

Field key to the commoner British Sphagna

Q1 Are the branch leaves hooded?	**YES** go to Section **SPHAGNUM**	**NO** go to Q2
Q2 Are the stem leaves minute?	**YES** go to Section **RIGIDUM**	**NO** go to Q3
Q3 Are the branch leaves squarrose?	**YES** go to Section **SQUARROSA**	**NO** go to Q4
Q4 Are the stem leaves concave?	**YES** go to Section **SUBSECUNDA & MOLLUSCA**	**NO** go to Q5
Q5 Do the stem leaves point upwards?	**YES** go to Section **ACUTIFOLIA**	**NO** go to Q6
Q6 Do the stem leaves point downwards?	**YES** go to Section **CUSPIDATA**	

Section SPHAGNUM

- Long tapering branches, 2° pigment present buff = *S. palustre*
- Blunt branches, 2° pigment present red, especially in inner cortex = ***S. magellanicum***
- Blunt branches, green/ochre plants, forms large hummocks on oligotrophic habitats = ***S. papillosum***
- Blunt branches, 2° pigment present brown, forms dense cushions, mires = ***S. austinii***
- Blunt branches, 2° pigment present olive brown, poor fens = ***S. affine***

Section RIGIDUM

- Black stem, compact habit, mires and blanket bogs = ***S. compactum***
- Green/colourless stem, western Scotland **(Rare species)** = ***S. strictum***

Section SQUARROSA

- Big pale green plants of base enriched sites, with strongly squarrose branch leaves = ***S. squarrosum***
- Brownish tinged plants of rich fen and basic flushes, with slightly squarrose branch leaves = ***S. teres***

Section SUBSECUNDA and MOLLUSCA

- Small lemon yellow/ tangerine plants with terminal branch leaves divergen' like crab claws; fruits abundantly = ***S. tenellum***

Q7 are the stems dark coloured?	**YES - go to Section A**	**NO** go to Q8
Q8 are the stems pale coloured?	**YES - go to Section B**	

Section A

- Symmetrical branch leaves, 3 or 4 branches per fascicle, curly branches = ***S. denticulatum****
- Asymmetrical branch leaves, 4 or 5 branches per fascicle, stem leaves >1mm = ***S. subsecundum***
- Asymmetrical branch leaves, 5 to 7 branches per fascicle, stem leaves <1mm = ***S. inundatum***

Section B

- A large aquatic moss = ***S. denticulatum****
- Pale orange coloured plant of basic flushes, asymmetrical leaf = ***S. contortum***
- Stem and branch leaves identical, both symmetrical = ***S. platyphyllum***

* *S. denticulatum* is a morphologically variable species and keys out in two ways.

Section ACUTIFOLIA

- 3 spreading branches per fascicle = *S. quinquefarium*
- Brown coloured plants = *S. fuscum*
- What shape are the stem leaves?


+ narrow parallel-sided spreading branches = *S. fimbriatum*


+ clear central area to stem leaf = *S. girgensohnii*


+ red pigment = *S. capillifolium*


+ red/orange pigment = *S. subnitens*


+ green pigment and many deformed stems = *S. molle*


+ red pigment = *S. russowii*

Section CUSPIDATA

- Long narrow branch leaves; aquatic = *S. cuspidatum*
- What shape are the stem leaves?


+ green stems, common species of lawns = *S. fallax*
+ orange stems = *S. pulchrum*


+ very green plant of marshes, boggy moorland and damp woods, large capitulum, pendent branches shorter or equal to spreading branches = *S. flexuosum*
+ plant of sloping ground, pendent branches longer than spreading branches = *S. augustifolium*


= *S. riparium*


= *S. lindbergii*

- One pendent branch per fascicle, rare species = *S. balticum*

IN SEARCH OF JUNIPER RUST

Jackie Muscott

On 13th May, in poor weather, Mary Clarkson and I set out in search of the Juniper Rust *Gymnosporangium cornutum*, which in the autumn infects Rowans, and in the spring Juniper. (See Photo) We had seen many infected Rowans around Hopes Reservoir in the autumn of 2006, so this seemed a good place to start. We were soon finding the conspicuous orange 'tongues' on the lower boughs of many of the Juniper bushes; and as a bonus, little patches of Moschatel or Townhall Clock *Adoxa moschatellina* sheltering under one or two of them. A most unusual habitat, indicating that the area was once considerably more wooded.

We then moved on to Linn Dean Water where I remembered seeing infected Rowans many years ago; and again we were not disappointed. We were also delighted to find a good colony of Early Purple Orchid *Orchis mascula* in full bloom at the north end of the site; and, on some rocks close to the burn, a nice patch of one of our most recognisable rare grasses Mountain Melick *Melica nutans*. A most satisfactory day, despite the rain.

MOUNTAIN MELICK

A GOSLING'S YEAR - A FICTITIOUS TALE OF A YOUNG GOOSE

(based on a natural phenomenon) *John Harrison*

Picture the scene: it's mid-June and a pale, brown-stained egg has just cracked open on a hummock on the banks of a fast-flowing river in Central Iceland. Thor has been born. The egg he is emerging from has been incubated by his mother for the past 26 days. He sits in the nest with his four siblings. Within a short time he is up and about and feeding. It will be 56 days before he is able to fly and he must eat a great deal to put on the weight he needs in order to fledge.

He becomes particularly partial to horsetail shoots but as he gets older his diet becomes more varied and he eats fruits, roots, shoots and leaves, punctuated by a variety of seeds.

When he is about 15 days old, his parents take him and his brothers and sisters to meet the other local families. It is at this time that both young and moulting adults are flightless, so it's very much a case of 'safety in numbers'.

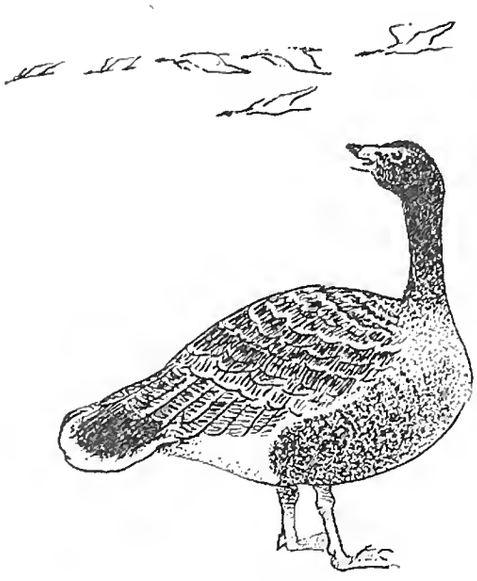
It's now early September and Thor can fly. He has flown with his parents and siblings to the southern lowlands of Iceland, joining thousands of other geese who are congregating and feeding up, ready for their epic 1,000-kilometre voyage south across the North Sea. A week later, he leaves for Scotland.

Thor has made it to the Loch of Strathbeg in Aberdeenshire. It is late September and he's been here for two weeks now with his two brothers and two sisters. His parents bred early and have been successful: most of the other families haven't fared so well and will have lost one or two of their offspring by the end of the winter. Thor's been out feeding on spilt grain in stubble fields with his family and is now one of 50,000 geese descending on the loch. The noise is deafening. He will need a good night's sleep though, as tomorrow they're off to Fife.

It's mid-October now and Thor is in a large field outside the coastal village of Gullane in East Lothian. The elder geese brought them there – they've been visiting it for years. The family is staying at Aberlady Bay – a wonderful spot, and along with 5,000 other geese, have been visiting this stubble field for the past few days now. At the roost they are joined by a further 15,000 geese on the mudflats, some he recognises from before, others are new to Thor. He does a bit of networking before bed.

The sun rises up over the Moray Firth. It is mid-April. During the past seven months, Thor has travelled extensively through Britain. He's avoided wildfowlers' shot in Lancashire and fed on huge sugar beet fields in Norfolk, amongst other adventures. He has been feeding on grass recently, getting lots of protein from it, since it has started growing again. He and the other geese have noticed that the grass is starting to get long and they know that it's time to return north to Iceland.

He's made it, he's back in Iceland. It's late April and the Southern lowlands have never seemed so busy. Thor has broken up from his parents, who are returning to their breeding area to raise another family. It will be another two years before Thor is ready to start his own family. He'll have many adventures before then: summers in Iceland; flying all the way up to North-East Greenland with all the other non-breeding birds to moult; and, of course, two more winters in Britain. He lets out a satisfied 'honk' and flies off to feed.



THE MOSS DAY - at Peebles on 17th March

Jean Murray

The idea was to combine a walk with a look at some woodland mosses, a subject the Nats have rather neglected. It can be quite hard to get started, as people tend to think they are difficult, but now that everything is being given English names that might help. I'll leave you to decide, once you've read this.

We started along the riverside path, stopping to look at two common wall-top mosses, Wall Screw Moss *Tortula muralis* with its upright capsules, and Grey-cushioned Grimmia *Grimmia pulvinata,* whose much shorter stalked capsules turn over and appear to be burying themselves back in the cushions. Both are particularly conspicuous at this time of year. At the first metal bridge we turned off onto the old railway and almost immediately found Big Shaggy Moss *Rhytidiadelphus triquetrus* in some profusion on the embankment. Some Nats already knew it as Teddy Bear moss, much more user-friendly!

Next came the light green fern-like Tamarisk Moss *Thuidium tamariscinum* which can form extensive mats. We would see it again at intervals along the way. The stems are green or almost black if wet, and that is useful to know, for identification. Fallen trees were blanketed with Cypress-leaved Plait-Moss *Hypnum cupressiforme* looking quite golden; and once onto the narrow track up into the real woodland there was a closely related finer version hanging on the living trees.

Our next find was the unimaginatively named Ordinary Moss *Brachythecium rutabulum,* which is rather difficult to describe: it spreads over stones and wood and always has a glossy look about it. It is much easier to identify when capsules are plentiful because the stalks are rough, easily seen with a lens and some people can feel the roughness with their lips or fingers.

Forest Star *Mnium hornum* was found on shaded ground and old logs. New light green growth beside very dark old plants can be deceptive and the fact that it can appear to have both drooping capsules and flowers seems odd, until you discover that the 'flowers' are actually male. The two sexes will be found growing together in matted clumps.

All this time we were steadily climbing and frequently seeing something much finer but similar to *Thuidium,* crawling on the ground or straggling at the base of trees. This was Common Feather Moss *Kindbergia praelonga* – previously *Eurhynchium* – and is well named; it is indeed both feathery and common.

Soon we turned left along a path that led to more open ground and paused to look at something else fern-like, but with obvious red stems. It has the Latin name *Hylocomium splendens.* The book I recommended, *Bryophytes of Native Woods*, gives it the name Step Moss which is a good description of the way it grows, but now apparently it is to be known as Glittering Wood-moss; I've no idea why.

Common Smooth-cap *Atrichum undulatum* came next. It grows upright like *Mnium,* and indeed resembles it at first glance, except that the leaves have transverse undulations, easily seen with a lens. At this time of year it is likely to be fruiting and will have fairly upright capsules with long beaks, quite different from *Mnium*'s drooping ones.

Anyone who has a lawn probably has Lawn Moss *Rhytidiadelphus squarrosus,* which was our next find. It also turned up on 99% of Nats outings last year. It appears to be green, just looking down on it, but if you pick a piece you will see that the stem is definitely red, a colour which turns up surprisingly often in mosses.

Most people probably already knew the next tall dark wiry moss as *Polytrichum* and could maybe add the name *commune* as well. The experts have been splitting the family and giving some different names. The one we saw was actually *P. formosum* but I think we'll just stick to calling it *Polytrichum,* especially as the English name has changed from Wood Hair-moss to some variety of Hair-cap, which actually makes sense as the young capsule does indeed have a very hairy covering.

By this time thoughts were definitely turning to lunch, so it was lucky that the last moss on the list was right on the opposite side of the path and an easy one to recognise. The Nats have long called it White-worm moss. It has flat pale green prostrate shoots which look almost white when dry, hence its name. *Plagiothecium undulatum* is its 'proper' name and the 'proper' English name now seems to be either Wavy Flat-moss or Waved Silk-moss. How about sticking to worms!

We lunched in the shelter of the wood out of the wind rather than brave the benches in the car park at the top of Cademuir Hill, and the entire party opted to return by a signposted track, which took us back to where we first turned away from the river. I enjoyed the day and I hope other people did too.

Ref: *Bryophytes of Native Woods* by Carol Crawford; published by *The Natural Resource Consultancy* for the Native Woodlands Discussion Group. £6.50

EXCITING NEW FINDS IN RECENT YEARS

Elizabeth Farquharson

The word 'twitcher' is sometimes used to describe the enthusiastic birdwatcher who goes to great lengths to see a rare species. There are times when the fungus enthusiasts behave in much the same way, but with rather less haste for, after all, fungi don't fly away. Much of our time as amateurs is spent in identifying the commoner species, but our enthusiasm needs the occasional boost caused by finding something different. It may be a southern species that has moved north of the Border, or a northern one that has come south. Occasionally one finds a rarity, or one that has arrived only recently from overseas. Sometimes our enthusiasm is fuelled at a more mundane level, by identifying at long last, a particular mushroom that has eluded us on previous attempts.

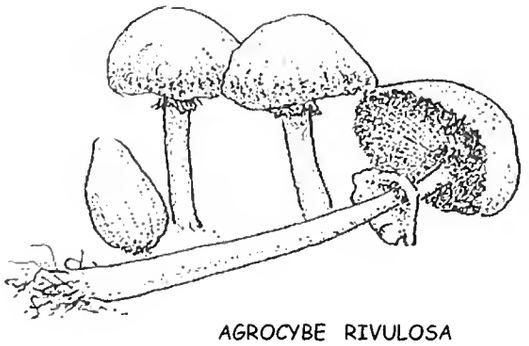
On two occasions we have come across fungi which have arrived in UK only recently. Several years ago we had an outing to Beecraigs Country Park and as we were returning to our cars at the end of the day, someone spotted some reddish objects in a grassy ditch. They looked rather like red peppers, somewhat passed their sell-by date. No-one had ever seen them before, so they were sent to RBGE, where they were identified as *Paurocotylis pila* which had only recently arrived in this country from New Zealand. It has now spread widely and has been reported from many sites. A year or two later it turned up in a Corstorphine garden, and more recently it has been seen in the grounds of Lauriston Castle. The second time we found a new arrival was this year, when two Nats were at Kindrogan for a week. Fungi weren't plentiful but we had our surprises. One day we went to Faskally and the two of us went to a favourite spot where shredded wood has been left in piles for many years. Some piles are quite new, while others are really ancient. This year the piles were covered in fungi, but one drew our particular attention; of medium size with a light brown very wrinkled cap, gills turning brown and a stem with a ring. Thoughts turned to *Agrocybe,* but attempts to name it back at the lab failed completely, until one person on the course remembered seeing a description of it. *Agrocybe rivulosa* arrived in the UK from the Continent about three years ago and is spreading quite rapidly. It is usually growing on wood chips. Very recently it was seen again on the outskirts of Edinburgh.

It always causes some interest when fungi turn up in unexpected places. Last year the very handsome fungus Golden Sock *Phaeolepiota aurea* turned up under a tree in the Meadows, where it looked distinctly out of place. It survived for several days in spite of being a conspicuous target for small boys looking for something to kick.

Also last year over a hundred *Gyromitra esculenta* appeared on a small rose bed in the middle of Lasswade, which had been covered with conifer wood chips. A third find of a fungus growing in an unexpected place occurred this summer when a fungus normally found in northern upland meadows of unimproved grassland was found on a lawn. No attempt has been made over the last forty years to improve the lawn, but a town garden is hardly an upland meadow. The fungus *Porpoloma metapodium* was so out of place that I asked Roy Watling to confirm its identity.

Working in the lab can have its excitements too. At Kindrogan, when checking a small fungus belonging to a group that has pink irregular-shaped spores I was astonished to find that the spores were completely square. *Entoloma rhombisporum* is not very common. Many different shapes turn up in the natural world, but very rarely do we find anything that is square.

So, keep looking, whatever your hobby, as there will be something exciting just round the corner.



AGROCYBE RIVULOSA

NUTHATCHES

Jean Murray

I hadn't intended writing anything about Nuthatches this year, as they appear to be happily settled in the area, even if they don't seem to feel that they can actually nest in the gardens they visit during the winter.

However, Maureen Richardson has managed to witness a most endearing episode in the family life of these delightful little birds. On a visit to the Woodside Garden centre, near Harestanes, north of Jedburgh, the TV screen in the cafe was showing a Nuthatch nest. When the sitting parent bird was about to leave, it very carefully and almost tenderly covered the eggs with Oak leaves.

There is at least one table in the cafe where you can watch birds at feeders while you eat, so if you have yet to see a Nuthatch, you know where to go.

IDENTIFYING FUNGI - the Kindrogan Fungus Course 2007

Mary Clarkson

'Not another fungus course!' was a friend's reaction to the news that I was going to Kindrogan Field Centre in September 2007. I've been at quite a few fungus courses and perhaps I should not have needed to attend another, but it's good to be able to focus on the fungi, away from all the jobs facing you at home. Besides, I knew that this was to be a course where the tutor, Liz Holden, would concentrate on teaching participants how to identify fungi (as opposed to searching for the rare and strange), and that there would be a great deal to be learned from her. And so it turned out. Each morning was spent out of doors, searching for fungi and looking at the field characters from which one could make a positive identification. Kindrogan is well situated, and sites visited included The Hermitage at Dunkeld, the Birks of Aberfeldy, Faskally, and Coylumbridge to give examples of different habitats. By and large, afternoons were spent in the lab. learning techniques to aid identification: which structures to look at, how to take a spore print, and how to use a simple key. Our tutor had borrowed microscopes so that a good instrument was available for each participant who wanted to try microscopy. Instruction was given individually and by the end of the week everyone was reasonably proficient. Once specimens had been positively identified, they were laid out on a display table in the lab, which gave everyone a chance to examine 'finds' and was a very helpful learning tool. Evening talks, on subjects such as fungal ecology and grassland fungi, were illustrated by pictures of beautiful scenery as well as of interesting specimens. Although not exactly a rest cure, the week at Kindrogan made a most enjoyable holiday with pleasant companions (and good food) which I would hope to repeat one of these days.

MURDER ON THE MEADOWS

Jackie Muscott

Crossing the Meadows one day last September I came across a pile of pigeon feathers, which reminded me of an incident the previous year, and also an article in last year's Journal.

In May 2006 I was walking down Middle Meadow walk with a couple of friends from the south when we came upon a bird of prey with a dead pigeon, almost as large as itself, barely a yard from the path. There were people wandering up and down, but the bird seemed intent on dismembering its victim, and only moved a few feet, dragging its prey, when we approached. I doubt if it could have lifted the pigeon and flown off with it anyway.

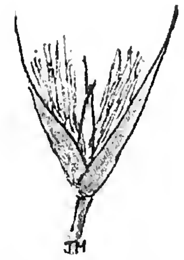
We optimistically decided the bird was a Peregrine, and one of my friends took a photograph, which I eventually managed to get hold of. After consulting various bird books and seeking expert advice however, I was forced to admit that the Peregrine was a Sparrowhawk. Apparently Sparrowhawks do take pigeons from time to time, though they usually go in for smaller birds.

The behaviour though was very similar to that described by Jo Wright (P34, Journal for 2006), and I wondered if his bird, described as a Kestrel, could also have been a Sparrowhawk. According to my bird book Kestrels usually feed on mice and other small Mammals.

CALAMAGROSTIS spp - SMALL REEDS

Jackie Muscott

The Small Reeds are beautiful grasses, flowering relatively late in the year. They are tall, and like wet places, and the first time I encountered them I confused them with Reed Canary Grass *Phalaris arundinacea*, but the flowers have tufts of hairs at the base of the lemmas and are extremely attractive under a lens. They seem to have popped up everywhere this year. The first time was with the Nats - the evening meet on 4th July to Cockmuir Verge. By the verge is an interesting marsh (an SSSI) and I couldn't resist getting over the fence to have a look. I returned with an odd-looking *Calamagrostis* which Douglas McKean eventually identified as a very rare species, *C x gracilescens* (*C. canescens x C. stricta*). Its identity has since been confirmed by an expert, and Douglas is delighted, as it's in 'his' patch. It has much shorter hairs than the commoner *Calamagrostis epigejos* illustrated.



Calamagrostis epigejos
Floret

FORTH ISLAND SEABIRD COUNTS 2007

Bill Bruce

Normally the main challenge for the island seabird counts is the weather. Frequently trips to the East Lothian islands have to be cancelled due to adverse wind or sea conditions. Visits to the islands further up the Forth are much less affected by the weather. This year, however, there was a different problem – there were more islands to be counted! For many years the RSPB have counted the seabirds on the Lamb, Fidra and Inchmickery, but unfortunately they were unable to do so this year. By splitting up, to count more islands in the same day, we were able to meet this challenge.

Fulmar: For some years the number of breeding Fulmar has been slowly decreasing. Last year, however, all islands showed an increase which averaged out at about 30%. This year numbers dropped on all islands, apart from Fidra where numbers increased. The overall result is a drop of about 11% which takes numbers back to their 2004 level.

Cormorant: The success of this species has varied over the islands it uses for breeding. On Craigleith, Inchkeith and Haystack numbers dropped, while on the Lamb and Carr Craig numbers increased. Last year's 347 apparently- occupied nests dropped to 335 this year – a drop of about 3%.

Shag: The total number of breeding Shags remained very close to last year's figure. However there were some big variations when looking at individual islands; for example, Craigleith went up from 118 to 199 nests (+69%), and May Isle dropped from 485 to 399 (-18%).

Great Black-backed Gull: For some years now, the numbers of this species have been steadily increasing – in 1995 there were 20 pairs breeding; now there are 58.

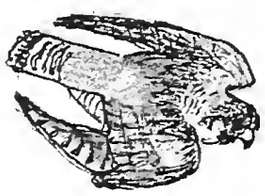
Lesser Black-backed Gull: Due to the restrictions of manpower and time, this species is not counted on all islands. On May Isle, where there have been regular counts, numbers have shown small changes up and down over the years. Last year there was a marked increase, with numbers up by 30% to 1,732 breeding pairs. This year numbers fell back by 4%, to 1,665 pairs.

Herring Gull: Again, this species is not counted on all islands. On May Isle, breeding numbers have shown variations up and down over recent years, but overall they have remained remarkably constant.

Kittiwake: Back in 1997 there were over 11,000 Kittiwakes breeding on the Forth islands. Today there are less than half this number. Still, this year's figure is up by 4% on last year. Although this looks like a small change, looking at individual islands there are some quite big changes: Bass Rock down by 128 nests or 25%; the Lamb down by 106 nests or 52%; Inchkeith up by 104 nests or 35%; Inchcolm up by 43 nests or 59%.

Razorbill: Over the last ten years, the number of breeding Razorbills have remained fairly constant, generally fluctuating between 3,200 and 3,800 pairs. Although this year's count of 3,407 pairs is down by 4% on last year, it is close to the middle of this ten-year range.

Guillemot: This species has not fared too well this year, with figures down from 28,576 to 21,039 birds on the breeding ledges – a drop of 26%. The only island to show an increase was Fidra, where the count was up by 130 birds (28%). The biggest drops were on May Isle (down 22%) and Bass Rock (down 65%)



Peregrines nest on Fidra and can be seen regularly on the cameras from the Seabird Centre, North Berwick. Recently four were seen on camera at the same time, on the Bass and Fidra cameras. They were seen on the cliffs at Falls of Clyde and Lairige outings.

SUMMARY of SEA BIRD COUNTS for the FORTH ISLANDS 2007

	BIRD COUNTS												
	Bass	C'Leith	Lamb	Fidra	Eye br'ty	Inch keith	Carr Craig	Inch colm	Haystk	Inch Micke	Ig/Frb	May	Total
Fulmar (AOS)	48	106	9	203	0	315	0	172	0	32	218	281	1384
Cormorant (nests)	0	79+	106	0	0	93	29	0	28	0	0	0	335
Shag (nests)	28	199	73	169	0	187	14	7	0	57	0	399	1133
Gannet (nests)	x	0	0	0	0	0	0	0	0	0	0	0	0
Eider (nests)	x	x	x	x	0	x	2	x	0	x	61	x	63
Great B-b Gull (nests)	x	17	4	2	0	5	1	0	1-2	1+	1	30	62
Lesser B-b Gull (nests)	x	x	x	x	0	x	3+	x	c7	x	c18	1665	1693
Herring Gull (nests)	x	x	x	x	0	x	c46	x	5-6	x	c94	2854	2999
Kittiwake (nests)	377	508	96	244	0	399	0	116	0	0	0	3424	5164
Common Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	83	83
Arctic Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	525	525
Roseate Tern (nests)													
Sandwich Tern (nests)	0	0	0	0	0	0	0	0	0	0	0	0	0
Razorbill(pairs/sites)	119	181	77	128	0	56	0	6	0	0	0	2840*	3407
Guillemot	1120	1150	1395	588	0	16	0		0	0	0	16770	21039
Puffin (as stated)	x	x	x	x	0	970 land+sea	0	39 land+sea	0	12	0		1021
									*3635 individuals				

Ig/Frb=Inchgarvie + Forth Rail Brg; ind=individuals; x=present but not counted; 0=none breeding; AOS=apparently occupied sites

THE PUFFINS ARE BACK

John Hunt

Formerly one of the largest colonies in Britain, Puffin numbers on Craigleith had plummeted from 28,000 pairs in 1999 to just a few thousand last year, because the Tree Mallow had completely taken over the island, preventing the Puffins from rearing their 'pufflings'.

With the help of landfill tax funding from Viridor Credits and permission from Sir Hew Hamilton-Dalrymple, who owns the island of Craigleith, an amazing feat has been achieved to rescue the plight of the Puffins - and all within just six months. It's all thanks to a team of over 100 volunteers, local schools, team leaders Maggie Sheddan and John Hunt, the Royal Marines and the generosity of boat operators and private boat owners, like local hotelier Stirling Stewart, ferrying people to and from the islands.

The SOS Puffin team of volunteers successfully cleared three acres of Tree Mallow just in time for the Puffins returning to nest in Mid-April. The Puffins have returned in numbers to reclaim their burrows, with the early birds almost waiting impatiently on the sidelines for the volunteers to finish ! As many as 96% of the burrows in the monitoring plots were occupied by the Puffins, compared to 30% in the areas where the Tree Mallow wasn't cut back.

Maggie Sheddan, a volunteer with the Seabird Centre, and the person responsible for bringing the problem to light, says: "It is a real thrill for everyone to be able to see the fruits of their labours so quickly. The Puffins' progress will of course be carefully monitored and recorded, in partnership with Scottish Natural Heritage, the Centre for Ecology and Hydrology, Edinburgh University and the RSPB, and work has begun again now that the Puffins have returned to the sea. This is a great result and we are all delighted.

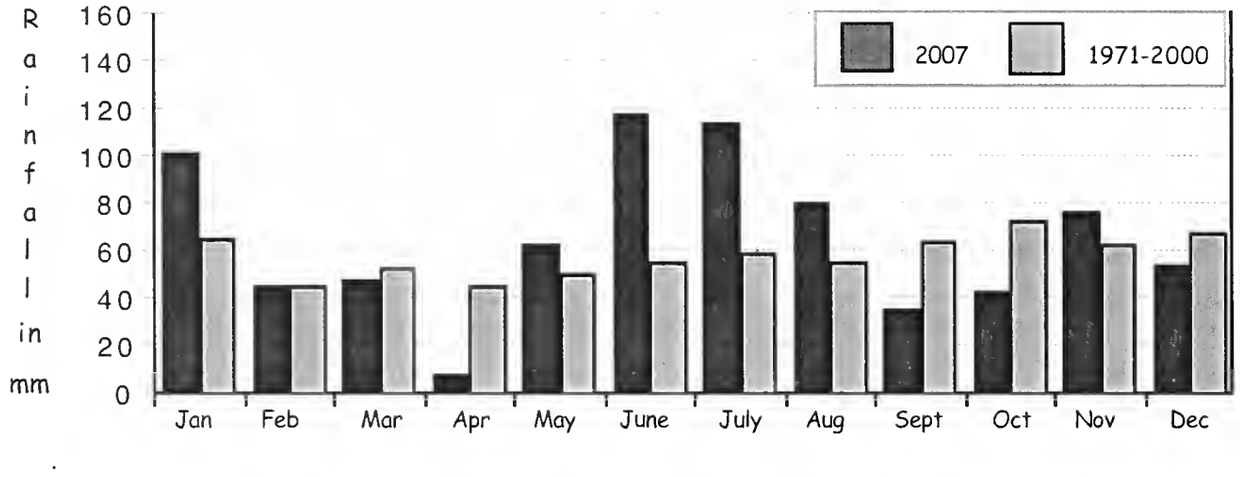
We thank John Hunt, for permission to use his writing for this update and for *The Weather Watchers* article. He is a Board member and volunteer at the Scottish Seabird Centre and one of the team leaders organising the removal of the Tree Mallow, Eds.

RAINFALL IN CORSTORPHINE 2007

Munro Dunn

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2007	101	45	48	7	62	117	114	80	35	42	76	54	781
2006	30	32	92	22	78	19	59	55	92	84	91	86	740
1971 - 2000	65	45	53	45	50	55	59	55	64	72	63	68	694

COMPARISON OF RAINFALL IN 2007 and 2006 WITH AVERAGE FOR 1971 - 2000 (in mms.)



The weather event of 2007 was the flooding in parts of the country, and the year is in danger of going down in memory as a particularly wet one. The summer rainfall in south-east Scotland, however, was much less exceptional than in some parts of England, where flooding was a major problem. In parts of the far north of Scotland it was actually below average. The summer's excess was partly offset by some quite dry spells at other times of year.

The upshot was a total of 781 mm., 12% above average, but a not uncommon variation from the mean, and a long way short of the excesses of 31% and 36% experienced in 2000 and 2002. The total for 2006 was 740 mm., not so very different from this year's, but the monthly figures show quite a variation.

The worst of the summer's wet weather occurred between mid-June and late July, although the wettest day of the year was Saturday 18th August, when the 39mm which fell accounted for half of that month's rainfall. The first three weeks of January were also wet, as was the second half of November. On the other hand, a very dry April, with only 7 mm - a near record for the month - was the heart of a dry spring, and there was also a prolonged dry period running from late August to late October.

The number of days on which there was a significant fall of rain, at 185, was average. As so often in recent years, therefore, the excess rain was the result of heavier, not more frequent, falls.

DROOPING STAR of BETHLEHEM

Ornithogalum nutans

Mary Robertson

On 3rd April I was surprised to see Drooping Star of Bethlehem in the grounds of Murrayfield House. Some years ago I had found it in the grounds of Hopetoun House, in one of the runs of the abandoned Beagle kennels to be precise. I have not seen it elsewhere and I find it curious that both plants are growing in the grounds of a large house surrounded by parkland.

The flowers are greyish-white, with a green stripe on the back of each petal, bell-shaped, nodding in a one-sided spike on a leafless stem. Leaves are linear, with a central white stripe, similar to Bluebell but floppier and more grass-like. I believe the flowers were much regarded for unusual flower arrangements. The plant is a native of Southern Europe - the Balkans and Asia Minor. No doubt bulbs were collected and introduced to Britain. Shortly afterwards I was looking through old records and discovered that I had found the plant growing wild in Crete.

WEATHER at the ROYAL BOTANIC GARDEN

Munro Dunn

Since the Meteorological Office base at Turnhouse was wound down, the long-established recording station at the Royal Botanic Garden has become the main source of weather data in the area. Thanks to Stephan Helfer, our editors, ever on the lookout for what might excite readers of the Journal, have secured some of the RBG's recent results, particularly the summaries for 2006 and 2007. These records cover rainfall, temperature (including grass minimum and soil) and sunshine, and include comparisons with the period 1976 and 2005.

The rainfall totals are lower than those for Corstorphine analysed on page 20, but that merely reflects the different locations of the two stations. Otherwise the writer is pleased to note that the two sets of rainfall readings are consistent with each other.

Temperatures in both years were, not unexpectedly, above the long-term average, the minimum by about 0.5C in both years, the maximum by 1.2 C in 2006, but 0.9C in 2007. The warmest day in the first year was 26th July with 27C, but the temperature in the second year rose no higher than 22C on 23rd August. While 2007's summer temperature may have disappointed some, the average maxima for some months, particularly April but also October and November, were well above average. Throughout the two years, the night minima never dropped as low as -7C.

In 2006, the total number of hours of sunshine was 1567 hours, 12% above the long-term average of 1400, but fell back to 5% above in 2007. April 2007 had 40% more sunshine than normal, and the sunniest day of that year was 19th May, with 14 hours, but June had only 69 hours, a deficit of 60%.

RBGE sum up 2007 as 'not altogether a brilliant year' as far as hot and sunny days were concerned: a mild winter, a warm spring and autumn, but a cool summer.

THE WEATHER WATCHERS

John Hunt

Some are weather-wise, some are otherwise. Benjamin Franklin

During the year Maggie Sheddan and I have had the pleasure of leading parties of volunteers from North Berwick to Craigleith on 17 occasions and to Fidra on four, in order to cut Tree Mallow. Over 100 different volunteers have taken part, many coming on repeat visits. Without their tremendous support, nothing would have been achieved and we owe a big 'thank you' to all of them, and to our boatman Dougie for transporting us safely.

Finding the right weather to take a party of volunteers to one of the islands in November and December is not one of life's most rewarding pastimes. Maggie and I have spent a lot of time peering into the rather murky crystal ball marked *weather forecast.*

Thanks to the internet there is no shortage of weather forecasts to consult. Radar maps, satellite pictures, pressure charts and detailed predictions up to two weeks ahead, create an impressive illusion of scientific precision which can deceive the unwary. However it soon dawns on even the most innocent observer that all these different forecasts rarely agree with each other, while they are liable to change at a moment's notice and without explanation. A healthy scepticism develops, but you still have to try to make some sense of the often conflicting information overload that confronts you.

As you track another depression racing across the Atlantic apparently destined to arrive at the weekend, do you despair and cancel the planned trip several days ahead, or hold on bravely hoping for a reprieve? At some point you have to reach a decision one way or the other, knowing that last minute cancellations can be frustratingly inconvenient for the volunteers.

So, after five weeks of weather watching without a single trip taking place, the arrival of the recent settled spell of calm weather in mid-December was a wonderful end-of-year present. At last we could get moving and two work parties landed on Fidra and one on Craigleith. We enjoyed the bleak beauty of the islands in the low winter sun and the bitter cold kept us working hard. It was the perfect antidote to Christmas shopping .

CHANGES IN DISTRIBUTION OF DRAGONFLIES AND DAMSELFLIES IN SCOTLAND

Betty Smith

DUMFRIES AND GALLOWAY

In her report on the Dragonflies and Damselflies breeding in **Dumfries and Galloway** 1979-2006 Barbara Mearns compares the situation in the period 1990-2002 with that of 2003-2006. (Mearns, B. 2007)

The ***Atlas of the Dragonflies of Britain and Ireland*** (Merritt et al 1996) showed the distribution of a total of 13 breeding species in Dumfries and Galloway (D&G) for the period 1975 -1990.

Despite many and repeated searches of the (D&G) area Barbara and other recorders did not see any other species between 1993 and 2002 apart from the finding of a Vagrant Emperor *Hemianax ephippiger*, found at Caerlaverock WWT Reserve on 3rd November 1996. This was the first, and still the only, record for mainland Scotland. The specimen is in the Tullie House Museum, Carlisle.

The species known to be breeding in 1975-2002 in D&G were Emerald Damselfly *Lestes sponsa*, Large Red Damselfly *Pyrrhosoma nymphula,* Azure Damselfly *Coenagrion puella*, Variable Damselfly *Coenagrion pulchellum*, Common Blue Damselfly *Enallagma cyathigerum*, Blue-tailed Damselfly *Ischnura elegans*, Hairy Dragonfly *Brachytron pratense*, Azure Hawker *Aeshna caerulea*, Common Hawker *Aeshna juncea*, Golden-ringed Dragonfly *Cordulegaster boltonii*, Four-Spotted Chaser *Libellula quadrimaculata*, Black Darter *Sympetrum danae*, and Common Darter *Sympetrum striolatum*.

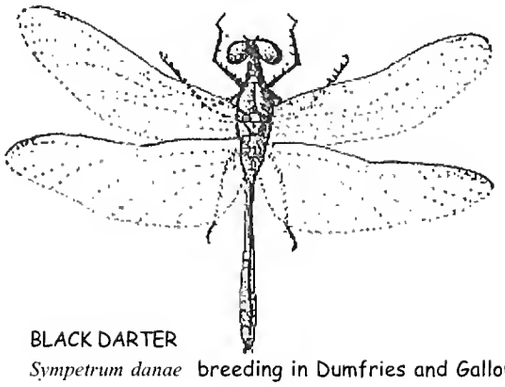
RECENT ADDITIONS TO THE RECORDED D&G ODONATA

Southern Hawker *Aeshna cyanea*, resident in the milder areas at or about sea level in Argyll, Inverness-shire and Moray (Batty&Clarke, 2006) is presently known from only one site in D&G. It was first recorded in Dumfries-shire on 4th Sept 2003 and is now probably breeding.

Banded Demoiselle *Calopteryx splendens* occurs in Scotland only near Dalbeattie. A colony was discovered there in 2006. It is not yet known if this is a recent arrival or a long-established colony that has escaped detection.

Migrant Hawker *Aeshna mixta* : In summer 2003 there were several unconfirmed sightings in D&G. In 2004 and subsequently, it was definitely seen at a Dumfriesshire site and since then at a few other sites in D&G. It may be breeding.

Emperor Dragonfly *Anax imperator:* The first was seen near Clatteringshaws Loch in 2003. Other single males were recorded at other sites that year, and in 2004 and 2006.



BLACK DARTER
Sympetrum danae breeding in Dumfries and Galloway

Broad-bodied Chaser *Libellula depressa* had only one previous Scottish record and that was at Craiglockhart Pond in Edinburgh in 2003. A photograph taken at the time has been seen by me and identified by David Clarke of Carlyle Museum. A single female turned up in Dumfries at a small ornamental pond where it was observed over a 3-day period, 24th-26th July 2006, during which it was occasionally seen ovipositing. A male and a female were seen on 27th July, 2006 at Mabie Forest in Kirkcudbright.

BERWICKSHIRE IN 2007

The arrival of new species from the south up until 2006 has been previously reported in the ENHS Journal 2006. Weather didn't favour dragonflies nor observers in 2007. However the Emperor *Anax imperator* is becoming a regular and didn't disappoint. It is almost certainly breeding at its usual farm ponds.

Neither the Red-veined Darter *Sympetrum fonscolombei,* nor the Black-tailed Skimmer *Orthetrum cancellatum* of 2006 fame, were recorded, but once again at least 2 males of the Migrant Hawker *Aeshna mixta* were seen by different observers at the Mire Loch at St Abbs in September/October.

OTHER NOTABLE SCOTTISH RECORDS

Warm spring weather favoured the spring species with sightings of Northern Damselfly *Coenagrion hastulatum* at Abernethy on 28th April, and a male Hairy Dragonfly *Brachytron pratense,* seen on 13th May searching for a female at Palnackie Pond in Kirkcudbrightshire. Elsewhere it was reported as emerging on 2nd May. This ties in well with the Palnackie sighting as a newly emerged Dragonfly probably spends about a fortnight maturing, away from the water, before returning to a breeding site to seek a mate.

Skye, normally wet, had a long spell of hot dry weather. Many bog pools where Azure Hawker *Aeshna caerulea* had previously been known to breed, either had dried up altogether or contained no larvae. This is not an unusual occurrence but leaves it vulnerable to global warming. On the occasion of this survey no larvae were found, despite several hours of searching. Fortunately this species is spread widely, though thinly, over large tracts of potentially suitable breeding habitat, eg. Rannoch Moor.

Thanks to the work of many recorders new sites were discovered for both the common ones and several of our rarer species. One particularly exciting discovery was of a colony of Keeled Skimmer *Orthetrum caerulescens*, in Kirkcudbrightshire near Newton Stewart and also on Arran, the island of Colonsay and mainland Argyll. Formerly it was known only in the West of Scotland, but further north.

Another outstanding discovery was of the Banded Demoiselle *Calopteryx splendens,* on the Whiteadder River, a tributary of the Tweed just north of Berwick. There is also an as yet unconfirmed record of a colony of this species on the River Aline in Ardnamurchan.

Acknowledgements

I am grateful to Barbara Mearns for sending me a copy of her report and to Pat Batty and David Graham for keeping me informed of significant observations without all of which this account would not have been possible.

References

Batty, P. and Clarke, D. 2006 Dragonflies: Northern England and Scotland. *British Wildlife* 18(2): 128-130.

Mearns, B. 2007. *The Dragonflies and Damselflies breeding in Dumfries and Galloway 1975-2006.*

Merritt, R., Moore N.W. and Eversham B.C., 1996 *Atlas of the Dragonflies of Britain and Ireland,* HMSO.

SOME INTERESTING DATES : SIGHTINGS FROM THE SEABIRD CENTRE

Mary Tebble

GANNETS	ARRIVAL	FIRST EGG	FIRST CHICK	LAST GUGA to LEAVE
2001	23rd January	16th April	31st May	
2002	10thFebruary	8th April	3rd June	
2003	21st February	16th April	24th May	
2004	10th February	23rd April	6th June	14th November
2005	11th February	23rd April	1st June	12th November
2006	13th February	23rd April	24th May	14th November
2007	21st February	23rd April	4th June	

PUFFINS	FIRST DATE SEEN ON LAND
2001	20th March
2002	19th February
2003	15th March
2004	19th March
2005	26th March
2006	28th March
2007	2nd April

SHAGS	FIRST EGG	FIRST CHICK
2002		30th May
2003	14thApril	
2004		20th May
2005		25th May
2006		2nd June
2007	17th April	18th May

FIRST SEAL PUP	
2004	6th October
2005	8th October
2006	11th October
2007	9th October

FROM THE ARCHIVE ..... 100 years ago

Jane Squirrell

Compared to today's ENHS Journal *The Transactions of the Edinburgh Field Naturalists and Microscopical Society* (the former guise of the ENHS journal) were presented in a much more formal style. There are, however, many similarities between members' interests and the workings of the society then as now. Even in 1907 a falling membership was a worry, although membership for the session 1906 - 1907 stood at 221, some 60 members more subscribing then, compared to today.

For the year 1906/7 twenty-three field meetings were arranged, the locations of which will be familiar to many current members; however I have not been able to locate Donibristle, The Whim and Chancelot Flour Mills; perhaps today's members will know of these locations. The Scottish weather was also a problem, and was so unfavourable that on two occasions excursions had to be cancelled.

April	27th	Charlestown	June	22nd	Culross
May	1st	Arthur's Seat	"	26th	Woodhouselee
"	11th	Borthwick Castle	July	2nd	Old Edinburgh
	15th	Ravelston	"	6th	Dolphinton to W. Linton
	21st	Bamborough Castle	"	10th	Chancelot Flour Mills
"	25th	Longniddry to Prestonpans	"	13th	Jedburgh
"	29th	Newbattle	"	20th	The Whim
June	8th	Lennoxlove	"	24th	Davidson's Main to Granton
	12th	Balerno	Aug	24th	Firth of Clyde
	15th	West Kilbride	Sep	16th	Cadzow Forest & Avon Glen
	18th	Old Leith	"	28th	Donibristle
			Oct	5th	Traquair House

Within the journal there are a variety of papers, listed below, many of which would have been read out during the indoor meetings; seven indoor meetings were held during the winter months. Even then it was noted that attendance was small compared to the membership.

ARTICLES PUBLISHED IN THE JOURNAL 1906/7

Notes on some of the Wild-Flowers in the Vicinity of Penicuik - *Mr J McCall*
A Few Remarks on Mushroom Phenomena - *Mr J Paton*
Hints on the Study of Hepatics - *Mr SM Macvicar*
On the Occurrence of the Rock Samphire (*Crinthmum maritimum* L.) and the Marsh Helleborine Orchid (*Epipactis palustris* Crantz) on the West of Scotland - *Mr A Sommerville*
Observations on some Copepoda that live as Messmates or Commensals with Ascidians - *T Scott*
British Hydrachnidae: Species collected during 1906 - *Mr W Williamson*
The Gramineae under Economic Aspects - *Mr R Smith*
Observations on the Flight of Flying Fishes - *Mr M Vaughan*
Suggestions for Co-operation amongst Local Scientific Societies - *Mr WC Crawford*
Cup-Marked Stones - *Col. J Sconce*

I found the article on the wild flowers of the Penicuik area of particular interest and an enjoyable easy read (unlike some of the more 'in-depth' articles found in the journal). On the moors around Penicuik Mr McCall found Green-winged Orchid *Orchis morio*, Lesser Butterfly Orchid *Plantanthera bifolia*, Hairy Stonecrop *Sedum villosum*, Field Gentian *Gentianella campestris* and Grass of Parnassus *Parnassia palustris*. In the woods and ravines of the Firth Estate both Oak and Beech ferns were prolific, and also Birdsnest Orchid *Neottia nidus-avis* and Small Cow-Wheat *Melampyrum sylvaticum* could be found; *M. sylvaticum* is a very rare plant nowadays; one wonders whether the author really meant *Melampyrum pratense*? In a hollow near the Dalmore Paper Mill, Toothwort *Lathraea squamaria* thrived, whilst on the banks of the North Esk, from Auchendinny to Penicuik, large clumps of both Restharrows *Ononis repens* and *O. spinosa* could be found. I wondered to what extent these notes reflect what can be found there today.

TWO COW-WHEATS, FREQUENTLY CONFUSED

SMALL COW-WHEAT
Melampytum sylvaticum

COMMON COW-WHEAT
Melampytum pratense

Members were encouraged to bring along natural history related exhibits to indoor meetings. In an era of taxidermy there were several stuffed exhibits including two Bearded Tits, a Polecat and a Pine Marten. Mr James Adams brought a live Mygale Spider from the West Indies, with its cast skin, as well as various microscopic preparations from that skin. Other exhibits included a live Hydrachnid found in a pool near Midcalder; Concretionary Nodules, with shell as nuclei, from Muscat on the Gulf of Omar; and a Kafir Piano – a search on the internet reveals this to be a musical instrument from Central and West Africa also known as a 'Kalimba'.

The microscopical section of the society also had a successful session. During the winter, members met once a fortnight (11 meetings in total) , to study that season's topic - Algae.

At the Annual General Meeting the presidential address, given by James Russell, was on methods of illuminating objects under the microscope. He advocated the use of diffuse day-light, while members in town should use one of the specialist paraffin lamps that were then available - how lucky we are today !

Reference: Transactions Edinburgh Field Naturalists' and Microscopical Society (1902-1907) Vol 5

NOTE from the EDITORS

We note that the contributors are all male !

Most meetings were held on Wednesdays and Saturdays, just as we do today. Some things don't change.

Donibristle is east of Inverkeithing in Fife. During the last war we think it was a sea-plane base. Now it is and industrial estate. Chancelot Mills used to be on the Water of Leith, and once dominated the landscape just off Ferry Road. It was built in 1892 for SCWS and moved to the shore at Newhaven in 1969..... The Whim is an estate on the A701, just south-west of Leadburn;

NOTE ON COW-WHEATS

Small Cow-wheat *Melampyrum sylvaticum,* is a rare woodland plant, easiest to see at the Birks of Aberfeldy. It is very similar to some forms of Common Cow-wheat *Melampyrum pratense*, with which it is frequently confused, though it is a slightly more slender plant. The flowers are always bright yellow, as are some forms of Common Cow-wheat, but they are shorter and the lower lip is strongly bent down. The sepals stick out all round. The flowers of Common Cow-wheat are longer and the lower lip is only slightly bent at the tips, while the sepals are upswept.

Jackie Muscott

SQUIRREL SINK

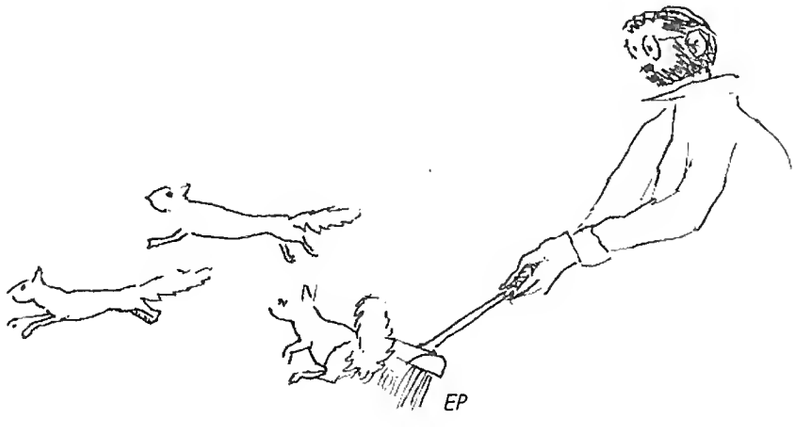
Ian McCallum

In my garden in Lenzie I feed the birds. Unfortunately, when the local Grey Squirrels realised that there was a good supply of food available, they became regular attendees at my feeders. I decided that I was not going to watch them spending their time eating their way through my bird feed.

I borrowed a squirrel trap from a friend, caught the Squirrel and deported it. When I returned home there were 2 squirrels in the garden and one actually peering through the window into my kitchen.

This exercise was repeated **four** times and there was always a new Squirrel waiting to take over this desirable territory. I realised that I could be permanently employed in moving the grey squirrel population around Scotland. If you can't beat them.....!

The next stage is to erect feeders on poles, greased if necessary, to prevent them accessing the bird feed so that we can hopefully enjoy more bird sightings.



MARY'S NATURE DIARY 2007

Mary Robertson

31st December, 2006 Hogmanay was very stormy, with winds 70-80 mph and heavy rain with thunder and lightning. Glasgow. Stirling and Newcastle cancelled their street parties but Edinburgh did not do so until 11pm. However we had lovely fireworks at midnight.

THE FIRST CELANDINE

JANUARY

4th White Crocuses in flower in Charlotte Square.
14th First Snowdrop in flower in garden, Blackhall.
19th Yellow Crocuses in garden.
21st Aconites in flower in garden.
22nd Tawny Owl calling at 2.30 pm in Ravelston Woods.
January reported to be the warmest since 1916.

FEBRUARY

17th A lovely sunny day. *Montia perfoliata* in flower in Mary Erskine School grounds.
20th Two Long-tailed Tits exploring trees in Murrayfield Avenue.

MARCH

5th First Celandine in Murrayfield House grounds.
20-22nd Thrush singing in garden trees around the house.
22nd About 30 Geese flying high westwards; sounded like Graylag. Very cold, with snow showers and a North wind.
30th An angrily squawking Herring Gull chased a Heron at roof top height, 8.30 am.
I watched a mouse helping itself to peanuts from the bird feeder and eating them at the bird table.
31st Lovely sunny day after a cold murky week under a blanket of grey cloud. Tortoiseshell Butterfly in garden.

APRIL

2nd Queen Bumblebee *Bombus lapidarius* with orange tail and dark body, in bedroom.
6th Tortoiseshell Butterfly in garden on Wallflower.
7th Easter Saturday. Woodpecker drumming in Murrayfield House Wood. 4.30pm
8th Woodpecker ditto in Lauriston Castle grounds.
12th A sunny day, the warmest and best for weeks. Heard Chiffchaff at Cramond.
Half Hoodie Crows quite common on the shore.
12th Peacock and Tortoiseshell Butterflies and Seven-spot Ladybirds in the garden.
20th-22nd Blackcap singing in Murrayfield House grounds.
24th-25th Overnight rain after a very dry month. In mid-April Edinburgh had a cold NE wind and haar, while the rest of the country (England) enjoyed summer weather and record temperatures.
It was reported to be the warmest April since records began in 1914. Chestnut, Sycamore, Lilac, Laburnum and fruit trees were all in flower by the end of the month. A magnificent Magnolia flowered in Murrayfield Avenue.

MAY

5th On Nats Tweed walk we saw Sand Martins and Swallows, and Common Sandpipers. We heard Willow Warbler, Garden Warbler and Whitethroat.
19th My neighbour reported a Fox with four cubs in her garden, about 9.00pm.

JUNE

An unsettled month with constant cloud cover over east coast of Scotland. It was very dry and the ground very hard. There were heavy rain storms on 23rd-24th and a shower of hailstones on 27th.
6th Red Admiral Butterfly on garden flowers.
7th Three Painted Lady Butterflies on Cistus in the garden.

JULY

July was a very wet month, reported to be the wettest since 1914. Not much sunshine and so low temperatures. I quote Flanders and Swan's song:

In July the sun is hot.
Is it shining? No it's not!

29th Herring Gull mobbing Buzzard over Corstorphine Hill with loud angry squawks.

AUGUST

8th	2 Peacock Butterflies in garden, the first I've seen all summer. Temperature 18C
21st	Sparrowhawk strike on Pigeon at Murrayfield House; and a second strike a few days later, also on a Pigeon.
23rd	Birch Bolete in Succoth Gardens. About 6pm I saw two 'sun dogs' in the sky, something I hadn't seen before, a mock sun or *parhelion.* I don't know what causes this phenomenon.*
26th	One Peacock Butterfly on Common Thistle at Hopetoun House. Primrose in flower there. Chiffchaff heard.
28th	Magnolia tree in flower for second time. Laurel Van Lutyens also flowering for second time. Elder bush with both second flowers and ripe fruit.

SEPTEMBER

1st	Nats outing to Aberlady. Highlight was 200+ Frog Orchids, mostly with seeds but one in flower and many seedling plants. There must have been a cull of rabbits !
14th	Skein of c70 Geese flying over NW Edinburgh in late afternoon. Next morning about 9.30am more Geese flew over - about a fortnight earlier than usual.
19th	Painted Lady in garden. This year I have had no Butterflies on my Buddleia. Other people have reported the same.
28th	Alerted by Eunice Smith on our Dalmeny Fungus outing, Dorothy Stuart and I found Chicken of the Woods fungus on a Cherry tree in Silverknowes Avenue.

OCTOBER A good part of October was spent in France.

NOVEMBER

11th	Found *Collybia tuberosa* near Earthballs in Murrayfield House grounds. Also Sulphur Tuft fungus. There has been a good crop of *Coprinus comatus* which I have enjoyed during Octobcr. Small flocks of Mistle Thrush and Fieldfare have been competing for the Rowan berries and Apples in the garden.
16th	My granddaughter reported Daffodils in flower in her garden at Fulwood, near Preston in Lancashire.
24th	Many Waxcaps were on the east lawn of Hopetoun House. Some had been damaged by frost, but I was able to identify Meadow Waxcap *Hygrocybe pratensis,* Crimson Waxcap *H. punicea, H. vitellina* (a small bright yellow one), Parrot Waxcap *H. psittacina,* Snowy Waxcap *H. . nivea.*
	I also found a few Liberty Caps *Psilocybe semilanceata*, and a fine, creamy Horse Mushroom *Agaricus arvensis* which I cooked and ate on toast for lunch !

And on 12h DECEMBER A solitary Snowdrop in flower in my Blackhall garden.

***parhelion** - *a bright spot in the sky on either side of the sun, formed by the refraction of sunlight through ice crystals high in the atmosphere.*

..... And in OCTOBER - A FRENCH NATURE RESERVE

In October my younger daughter Jane and her husband took me for my 'summer' holiday to their home in Northern France, not quite Normandy, nor in Picardy, but in Verdun, between Beauvais and Gisors, where they have an old mill house in a non-commercial village, surrounded by agricultural land. Here the farmers grow wheat, rape, sugar-beet, sunflowers and maize in enormous fields which look very pretty from the air. The soil is calcareous clay with flints, and chalky hills roll gently across the landscape.

On Wednesday 10th October, Jane and I set out by car to explore a local nature reserve called La Cote Sainte-Helene, Pays de Bray at an altitude 190 metres, off the RD104 at the village of Saint-Pierre-es-Champs. We passed through small villages with traditional Normandy-style houses, and copses and meadows with sheep and cattle. The area has been known since Neolithic times and the Roman occupation. We climbed up from the car park to find the path. Trees are the dominant feature, leaves just turning colour and littering the ground. Beech, Hornbeam, Oak, Lime, Elm, Ash, Sycamore and Silver Birch are all there. At the woodland edge is an even longer list of species: two Hawthorn species, *Crataegus monogyna* (our native Hawthorn) and *C. laevigata*, Rowan, Blackthorn and Elder, all laden with fruit; Dogwood, Grey Willow, Hazel, Buckthorn, Spindle, Field Maple, Honeysuckle, Guelder Rose, Wild Rose, Clematis, Wild Pear and Apple, which may be an escapee from a local orchard. We saw Red Squirrel and heard noisy Jays. There were several varieties of fungi, but I was only able to identify Rooting Shank *Oudemansiella radicata,* Puffball *Lycoperdon perlatum* and a giant young *Amanita phalloides,* still in its veil - the Death Cap !

From their seed heads we were able to identify Marjoram, wild Thyme, Solomon's Seal, Lavender, Arum and Vetches. Heather was in flower. The meadow below the path bordering the south-facing slope is particularly interesting because of the variety of wild Orchids which grow there and flower in the spring. I have to return.

8th-12th	Many Peacock and Red Admiral Butterflies sunning themselves on the brick wall of the house.
12th October	Another walk, this time across fields where the fungus *Volvariella speciosa* was found.

BATTLE FOR SCRAPS

Jackie Muscott

THE CHASE

On 17th August I was wandering about in the grounds of Astley Ainslie Hospital (a surprising amount of Wall Lettuce *Mycelis muralis* around) when I came to the place where they keep large containers for waste, including (or mainly) food. There are usually Magpies and Grey Squirrels hanging around, and while I watched, a Squirrel managed to retrieve some scrap of food, ran down the side of the container with it, pursued by several Magpies, then ran across open ground towards some trees and to my amazement the Magpies followed it - on foot! I don't know what happened when they reached the trees but the pursuit was quite comical.

Mind you, I did wonder if the waste food should be quite so accessible. The containers were very tall so I could not see whether there was any kind of lid or whether the waste was wrapped.

Incidentally there was also a very noisy young bird of prey around - probably a Sparrowhawk.

NEST BOXES, FLEAS AND WEATHER

Neville Crowther

Annually a group of volunteers which includes Lesley Fairweather and Phil McInnes from our society do a circuit of several SWT nature reserves with ladders, pliers and notebooks. We record evidence of usage of nest boxes and we scrape out old nest debris, including fleas and feather lice, to prepare the boxes for the next season. Despite rubber gloves, certain people always get flea bites, while others, strangely, never do.

The boxes often have unwelcome occupants such as Wasp bykes. In our Owl boxes, Grey Squirrel drays are sometimes built. The percentage of boxes used successfully gives us a year-on-year snapshot of the suitability of weather in different breeding years. As Blue and Great Tits account for about 90% of the used boxes, it reveals which conditions are best suited for these species.

At Roslin Glen, which has the best data set, the 2007 season was unusual for the number of unhatched eggs and dead chicks. Of the 36 nest boxes, 27 had nests started, but four were not completed. Six of the remaining 23 had at least one unhatched egg (mean 2.2) and 8 had dead chicks (mean 1.8), all expiring at a late stage of brooding. We suspect that none of these nests had been deserted. It is only the figures for dead chicks which are unusually large. We know that the weather during May and June was cool and wet. The peak demand for caterpillars for large broods may not have been met, and the need for longer hours of foraging by adults may have produced chilling of unbrooded chicks.

Is anyone aware of comparable data from elsewhere?

I heard something on the radio recently about the crash in successful fledging among Blue Tits last year, due to the lack of suitable caterpillars during the cold wet summer. There are plenty of Blue Tits around in Marchmont however, so maybe the winter survival rate has been good. *JM*

Look at Neville's photo of the 'unwelcome occupants' !

WHITE CREEPING AZALEA *Loiseleuria procumbens*

Roger Holme

Whilst hillwalking on Aonach Buidhe, a remote mountain just under 3000 feet between Loch Mullardoch and Killilan, in May 2007, I stumbled upon a patch of pure white *Loiseleuria procumbens* on the saddle just west of the summit. Being a keen hillwalker I am familiar with this species, but cannot recall seeing a pure white form before. There were several separate plants in the immediate area and all were white. I did not see any normal pink plants for some distance from these. This is not merely a question of faded flowers, as the flower buds were also clearly white. See photo pages.

There is only one known reference to this colour variety recorded in the *Journal of Botany* LXXV, 1937, 267 by S. Gordon, given here by courtesy of Jim McIntosh RBGE..

'White-flowered Azalea procumbens - on high ground (about 3000 feet) above Loch Mullardoch, near the borders of Ross and Inverness on May 27, 1937, I came across a white-flowered plant of Azalea (*Loiseleuria*) *procumbens*. The flowers were a lovely waxy white: the buds tinged with palest green or palest creamy-white; the leaves were more bright green than the leaves of the usual pink-flowering form. The plant was growing quite alone, although elsewhere on the hill the species was growing abundantly. - Seton Gordon.'

Jim also checked both Stace's New Flora of the British Isles & Clapin, Tutin & Moore's Flora of the British Isles and neither mentions the possibility of white flowering *Loiseleuria procumbens*, so not considered a variety recognised by Stace & CTM at least.

Comment Presumably these plants are a mutation, lacking the usual colour gene, like White Heathers *Calluna vulgaris*, *Erica cinerea* and *Erica tetralix*, all of which can be white, and lack a reddish tinge in stems and leaves, as Roger noted. I've also seen colonies of white Selfheal *Prunella vulgaris*, and there used to be white Herb Robert *Geranium robertianum* in Pepper Wood. White Pink Purslane *Claytonia sibirica* is frequently white, to the confusion of budding botanists.

Jackie Muscott

AN ANCIENT TREE

Jean Murray

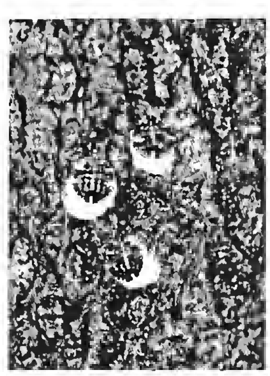
One of my favourite places for a short walk has always been the Peel Woods area, near Clovenfords/Caddonfoot. On both sides of the Glenkinnon Burn there are many really old trees, chiefly Oak. You can usually rely on hearing Jays, their call being unmistakable, though they are really hard to spot. The higher slopes are Forestry Commission land, but recent clearances have led to new paths being made by the local Woodlands Trust. A short climb leads to lovely views of the surrounding hills. There's the possibility of finding that some new plant has appeared; and there are lots of mosses !

Anyway, imagine my surprise when I noticed a new information board at the car park entrance, erected by Borders Forest Trust, stating that the large Oak on the slope above is one of the oldest trees in the Borders, and has been named the Glenkinnon Oak. It is thought that it perhaps dates back to Flodden - 1513, but was certainly known when Sir Walter Scott visited Ashiesteel House in the 1800s. He had a favourite mound further up on the opposite side of the burn where he sat to write, and so probably knew the tree well. Every time there's been a gale I've half expected it to come crashing down, but it's obviously a survivor.

Interestingly, the Borders Heritage Trees web site simply gives the age as 300 years. You may have noticed that I've mentioned four different organisations, all busy in this one small area.

SCALE INSECTS

Jackie Muscott



In May last year, Mary Clarkson's grandchildren told her about some curious beasties on the bark of trees near their school; teacher did not know what they were. Out of curiosity we went to investigate, and were equally puzzled; they were small dark shield-like objects with white cotton-wool-like material round the edges, making them stand out. After consulting Keith Bland we discovered they were Scale Insects which feed on sap, and are related to Aphids.

The females are wingless and, after the first instar, unable to move around. Some seem to look like tiny slugs (we saw some of these later in the year), but most are protected by a waxy or horny carapace, like those on the trees near Sciennes School. Many species reproduce by parthenogenesis, and most produce lots of eggs. There were quite a lot on some of the Sciennes trees and those we examined had a mass of eggs beneath. Keith said they were quite common, and one of the grandchildren later reported more insects on the Meadows. Kids have such sharp eyes!

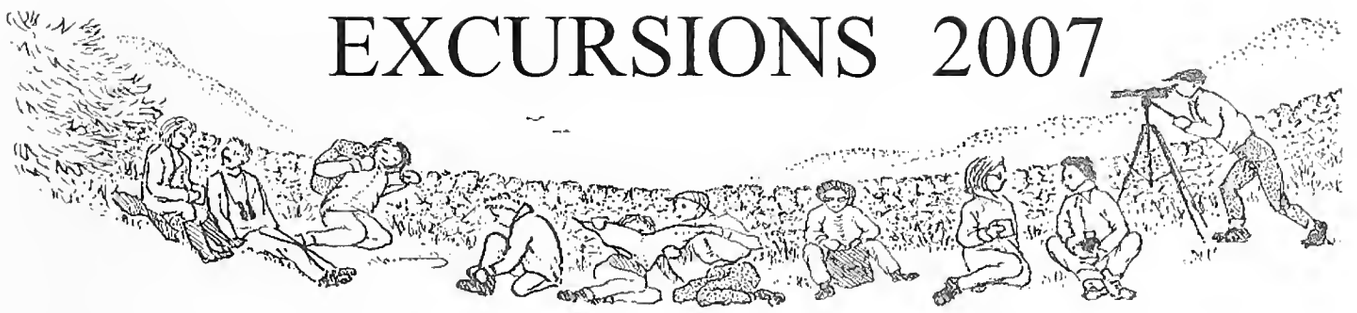
EXCURSIONS 2007

	DATE	PLACE		LEADER
January	20th	Saturday	Four sites of the Botanic Garden	Peter Tothill
February	17th	Saturday	Skinflats	Joanie Fairlie
March	17th	Saturday	Peebles	Jean Murray
April	14th	Saturday	Coastal Walk - Coldingham	Neville Crowther
May	5th	Saturday	Tweed Walk	Eric and Eileen Perry
	9th	Wednesday	Bavelaw Marsh	Molly Woolgar
	12th	Saturday	Falls of Clyde	Jackie Muscott
	19th	Saturday	Birdsong - Ormiston Big Wood	Lesley Fairweather
	26th	Saturday	North Esk Reservoir	Mike Jones
June		ISLE of BUTE	Monday 4th - Friday 8th June	
	16th	Saturday	Inversnaid	Joanie Fairlie
	21st	Thursday	Seabird cruise	RSPB
	23rd	Saturday	Lairige Cliffs, Tarmachan	Jackie Muscott and Mary Clarkson
	27th	Wednesday	Inveresk Lodge Garden	Margaret Perry
	30th	Saturday	Union Canal and Addiewell Ponds	Betty Smith
July	4th	Wednesday	Cockmuir Verge, Midlothian	Neville Crowther
	7th	Saturday	Prestonhall	George McDougall
	11th	Wednesday	Royal Mile	Betty Mitchelhill and Sandra Stewart
	14th	Saturday	Linn Dean	Neville Crowther
	21st	Saturday	Nameless Burn, Threeburnford	Michael Braithwaite
	28th	Saturday	Palacerigg Country Park	John Watson
August	4th	Saturday	Barns Ness	Grace Jamieson
	11th	Saturday	Carrifran Wood	Hugh Chalmers
	18th	Saturday	Seacliff	Jean Gilchrist
	22nd	Wednesday	Holyrood Park - Bats	Natalie Taylor
	25th	Saturday	Dunbar	David McAdam
September	1st	Saturday	Aberlady	Lynn Youngs
	8th	Saturday	Tentsmuir	Mary Clarkson and Jackie Muscott
	15th	Saturday	Mavisbank	Tom Delaney and Neville Crowther
	22nd	Saturday	Dalmeny Estate	Eunice Smith
	29th	Saturday	Hangingshaws, Yarrowford	Mike Richardson
October	13th	Saturday	Pressmennan Wood	Chris Ellis
	27th	Saturday	Vane Farm	Joanie Fairlie
December	1st	Saturday	Yellowcraig to North Berwick	Mary Tebble
	28th	Friday	Christmas Walk - West Linton	Janet Watson

WINTER TALKS 2007

24th January	NATIVE TREES: THEIR PAST, PRESENT AND FUTURE	*Richard Ennos*
21st February	CHANGES TO SCOTLAND'S BIRD LIFE: a new avifauna	*Ray Murray*
21st March	WILDLIFE CRIME	*Jim McGovern*
25th April	MEMBERS' NIGHT	
26th September	WILD GOOSE CHASE - CAERLAVEROCK TO THE ARCTIC	*Brian Morrell*
24th October	THE WATER OF LEITH: ITS WILDLIFE AND THE WORK OF THE TRUST	*Helen Brown*
21st November	BUTTERFLIES of SCOTLAND and BULGARIA	*Paul Kirkland*

EXCURSIONS 2007



FOUR SITES OF THE BOTANIC GARDEN

Date 20th January
Leader Peter Tothill

The Royal Botanic Garden Edinburgh was founded as a physic garden in 1670 by two doctors, Andrew Balfour and Robert Sibbald, who appointed James Sutherland as Head Gardener. The first site was a small patch near Holyrood Palace, but as more space was required, expansion into the grounds of Trinity Hospital and subsequent moves, to Leith Walk and then Inverleith, took place.

About 20 people braved gales and earlier rain to assemble by the Scott Monument for a walk round the four sites. Our first stop was Waverley Station, formerly the site of Trinity Hospital, where a plaque commemorates the Garden's foundation.

Then on down the High Street, with a diversion to see Dunbar's Close garden, a quiet oasis created by Patrick Geddes and restored in 1979 in the form of a medieval garden. Outside the Parliament building we looked across to the Palace grounds, to the approximate position of the first Botanic Garden, in what was previously St. Ann's Yards. Rather more certain was the site of the King's Garden, near Queen Mary's Bath House. Caring for this was included in Sutherland's duties and he was appointed King's Botanist. He was also made a professor at the University.

We climbed the path through Regent Road Garden, stopping to admire the *Stones of Scotland,* commemorating the new Parliament. It consists of a ring of different stones from all parts of the country, designed by sculptor George Wyllie and enhanced by a poem by Hugh McDiarmid. Traversing the shoulder of Calton Hill we looked down on Edinburgh's newest garden, on the roof of the Glass House Hotel.

In 1763 the Regius Keeper, John Hope, secured a larger site for the Garden on Leith Walk. Our walk took us to the only remaining building, the Head Gardener's cottage. It presented a sad sight. Georgian gem it might have been, but it is apparently not a listed building, and has deteriorated in the last few months, now being empty, with broken and boarded windows.

The last remaining fragment of the Garden itself is the Hopetoun Crescent Garden, and this is a happier story. It has been restored by the joint efforts of the City Council, RBGE and a devoted band of local volunteers. We spent some time reading the excellent display board outlining the history, and looked at some of the associated plants. A small clump of Rhubarb represents the large fields that were necessary for 'physic'. A *Buddleia globosa* commemorates John Hope, as he first classified it, using the system then recently developed by Linnaeus. Monkey-puzzle *Araucaria araucana* was introduced from Chile by Archibald Menzies, one of the early Scottish plant collectors. *Berberis darwinii* speaks for itself and for some of his specimens in the Botanics Herbarium. Peter claimed that one of the tree labels was wrong: a Dawn Redwood *Metasequoia glyptostroboides*, is labelled Coastal Redwood *Sequoia sempervirens*. Snowdrops, which have been planted by local school children, were just appearing.

After 50-odd years the Leith Walk site proved inadequate, so the then Regius Keeper, Robert Graham, with Head Gardener Tom McNab, arranged the final move, to Inverleith. The contents of the garden, including quite large trees, were moved by horse and cart over the period 1820 – 1823. Our stroll took rather less time, and went via Scotland Street, (seeking, in vain, number 44!) and the King George V playing-field-cum-garden. We also saw the end of the Scotland Street tunnel, the site of the former Edinburgh to Leith railway line. We reached RBGE Inverleith, to make for the café in time for lunch. Some of the party called it a day at this point, but a dozen or so were led, via some of the magnificent Rhododendron collection, to the Fossil Lawn. Here lies the largest fossil tree in Britain, excavated from the nearby Craigleith Quarry, together with some living 'fossil trees', *Ginkgo biloba*, persisting unchanged since dinosaur times, and *Metasequoia glyptostroboides*, known only in the fossil record until 1941, when it was found living in China.

Then into the temperate Palm House, built in 1858, and still the tallest in Britain. Plants of interest included the extremely rare *Rhododendron tuhanensis*, imaginatively displayed in a Wardian case, and a thriving *Wollemi nobilis*, another recent 'fossil' discovery from Australia. Peter recommended the 10 hours of commentary on the audioguides to the

glasshouses, and quoted Steven Blackmore, the current Regius Keeper, on a *Podocarpus milanjianus* growing there. The next outdoor move was threatened by gathering clouds, and rain fell before we reached the Garden exit.

Peter Tothill

NOTE The Gardener's cottage is not forgotten. The friends of Hopetoun Crescent Gardens have embarked on a rescue plan, starting with an application for a Heritage Lottery Grant to commission an urgent detailed survey of the building.

SKINFLATS

Date 17th February

Leader Joanie Fairlie

No-one could have been more surprised than me at this little jewel of a place, hidden amongst all the industry that is Grangemouth refineries. There is nothing like leading an excursion to somewhere you have never been to! Back in July, after another excursion, I went with Margaret Perry to have a look-see and identify somewhere for Nat-mobiles to park. I had then planned to do a proper recce before the excursion itself. Well, the recce didn't happen for various reasons, and I turned up to lead, not knowing where I was going, but clutching the map!

However, the excursion turned out very well; we had excellent weather, a crisp, cold day with the sun shining and beautiful views to Ben Ledi and Ben Vorlich, Ben More and Stob Binnein, and Ben Lomond, sadly with barely any snow on them.

Skinflats has a rather peculiar name. It was named by Dutch engineers brought here to reclaim land in the 1700s. They dubbed their achievement 'beautiful plains', the Dutch words being corrupted to create a name that has been described by some as the ugliest in Scotland! Some also say the place itself is ugly. Well the village may not be the most attractive, mostly grey-looking council houses, but the area really did look at its best in the glorious sunshine.

We started our walk by heading back to the River Carron. All the way along the roadside we heard masses of Skylarks singing. They were certainly enjoying the sun, and I was certainly enjoying listening to them; my first of the year and a sure sign of spring on the way. We got to the river, which, on its way to the Forth estuary, forms a natural boundary to the Grangemouth works; and we followed a path along the banks. We were rewarded with Reed Bunting, Stonechat, Robin, House Sparrow, Dunnock and Blackbird, all either posing in the sun, or flitting from bush to bush.

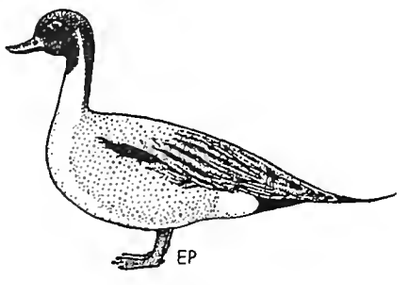
On the river we saw good old Mallard, plenty of Teal, Red-breasted Merganser and a solitary Ruff. We turned away from the river along a small path running through a wooded plantation. Through here we saw Blue, Coal and Great Tits, Goldcrest, a Yellowhammer showing beautifully, Redwing, Greenfinch and Chaffinch. And on the fields leading down to the small loch were all the Corvids. We also noticed the feeding station of what was most likely a Sparrowhawk, with a pile of pigeon feathers at the foot of the tree trunk. All through the plantation, a Buzzard was heard circling somewhere overhead.

On the lochs we saw Mute Swan, lots of Shelduck, Goldeneye, Herring, Common and Black-headed Gull, the latter with their heads beginning to turn black. Of the waders, we had Godwit (probably Black-tailed), Curlew, Redshank, Peewit and Dunlin. There was a large flock of very jumpy Pink-footed Geese but we were unable to see what was spooking them; possibly doggy-walkers. There were several Roe Deer round one of the lochs too; perhaps it was them. At the second loch, we found Wigeon, Dabchick and a few Greylag geese.

We had lunch sitting on some fallen tree trunks and we found quite a few 7-spot Ladybirds, obviously come out to warm themselves. We walked on down to the River Forth with masses more Shelduck, but only two Pintail. This part of the Forth estuary holds the largest number of wintering Pintail and I had rather hoped for more than two. And finally, on the way back to the cars, walking between the fields, we disturbed a small covey of Partridge.

On the botanical side, in flower we had Red Dead-nettle, Common Plantain and Dandelion. As far as I am aware, there were no fungi of note.

Joanie Fairlie



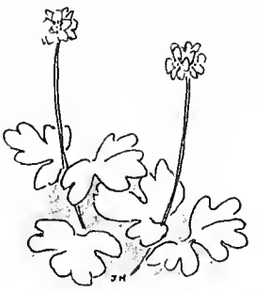
THIS PART OF THE FORTH HAS THE GREATEST NUMBER OF WINTERING PINTAILS, BUT ONLY TWO ON THIS OCCASION

PEEBLES - SOUTH PARK WOOD

Date 17th March
Leader Jean Murray

There were signs of spring everywhere: the Snowdrops were going over, but the Cornelian Cherries *Cornus mas* which had been planted by the river were in full bloom (sprays of small yellow flowers on leafless twigs). This introduced tree is uncommon so far north, and apparently the bright red fruits rarely ripen even in the south; however with global warming this may change. Cherry Plum *Prunus cerasifera,* Alder *Alnus glutinosa*, Larch *Larix sp.* and Gorse *Ulex europaeus* were also coming into flower.

Woodland plants in bloom included the rather inconspicuous Moschatel or Townhall Clock *Adoxa moschatellina*, and in wetter areas Celandine *Ranunculus ficaria*, Opposite-leaved Golden Saxifrage *Chrysosplenium oppositifolium* and Giant Butterbur *Petasites japonicus*. The latter is a fairly recent introduction which spreads vegetatively along riversides. It never sets seeds since only male flowers are known in Britain; presumably they are more showy than the females. When young, the plants look like small cauliflowers, and can be seen nearer to home in Blackford Glen, having spread downstream from Redford.



TOWNHALL CLOCK
Adoxa moschatellina

There were plenty of our two commonest ferns, Broad Buckler and Male Fern in the wooded area, some fronds in sheltered areas still green but a bit battered. Two handsome evergreen ferns were noted however: Hart's-tongue *Phyllitis scolopendrium* and a splendid colony of Hard Shield Fern *Polystichum aculeatum* near the old railway tunnel.

It is not a brilliant time of year for fungi, but it was interesting to note that a number of rusts were already putting in an appearance; both the common Celandine rusts were present: the yellow *aecia* or cluster cups of *Uromyces dactylidis* and the dark brown telia of *Uromyces ficariae*, while the brown telia of *Puccinia adoxae* were just emerging on the Moschatel. At the other end of the scale, the most spectacular large fungus seen was the Maze Gill *Daedalia quercina*, a woody bracket with maze-like gills, which infects Oak.

As for the fur and feathers, we were all delighted to see the rakish Goosanders along with a few Mallards, on the Tweed, and even more delighted to hear the call of a Nuthatch, a bird which is becoming quite common in the Borders and is spreading into the Lothians.

A couple of mammals, while remaining unseen, had left plenty of evidence of their presence: lots of well-chewed fir cones damaged by Squirrels (presumably Greys), and plenty of Mole hills.

Jackie Muscott

A COASTAL WALK - COLDINGHAM TO EYEMOUTH

Date 14th April
Leader Neville Crowther

Despite some initial apprehension about the logistics of a linear walk, we were able to shuffle three cars from the Coldingham Bay car park along to Eyemouth and get the drivers back to the start by the allotted time.

Although sunny inland, the haar disappointingly was to remain with us for most of the day, obscuring both seascapes and seabirds until late afternoon. Despite this, there was a wide variety of things to see. With 22 members present, and on a winding cliff path, it was often difficult to stay in contact when such diverse interests were represented. The cliff scenery of rocky headlands and bays was spectacular, and signified a complex geology. From Coldingham Bay to the Fleur Burn, the coastal exposures are initially of Silurian greywackes and shales. The steeper cliffs eastwards to Eyemouth are a mix of Lower Old Red Sandstones and intrusions of porphyritic igneous rocks of a similar age, all more resistant to erosive forces than the Silurian. Early in the walk whilst crossing the tiny Milldown Burn we found about twenty toads, most in amplexus, with many strings of spawn as evidence of their dalliances.

Of most interest to those botanically inclined were the vascular plants of the cliffs and coastal grassland. The rocky steep cliffs and slopes had suffered less from grazing pressure, and usually had more unusual herbs such as Wild Onion *Allium vineale*, Kidney Vetch *Anthyllus vulneraria* and Burnet Saxifrage *Pimpinella saxifraga*. Also indicating a base rich substrate were colourful flowers such as Lady's Bedstraw *Galium verum*, Mouse-ear Hawkweed *Pilosella officinarum* and Thyme *Thymus polytrichus,* often with the two-tone tussocks of Meadow Oat-grass *Helictotrichon pratense,* and the grey green coastal form of Red Fescue *Festuca rubra.* Rocky eminences often had clumps of Thrift *Armeria maritima* and Sea Campion *Silene uniflora*. Cowslips *Primula veris* and Primroses *Primula vulgaris* clustered on many of the grassier slopes and also, unusually, their hybrid False Oxlip *Primula x polyantha.* It could easily be mistaken for the Oxlip *Primula elatior*, which however only occurs in the south of England and presumably originated from one such hybridisation many millenia ago. Interestingly all three taxa had both 'pin-eyed' and 'thrum-eyed' flowers.

Whenever the path dropped down to sea level there were good displays of lichens on the rocks of the littoral, often showing bands of colour. Those belonging to the genera *Xanthoria* and *Caloplaca* (orange yellow), *Ramalina* (grey green), *Verrucaria* and *Lichina* (black), *Anaptychia* (brown) and *Lecanora* (white) were recognised. Chris Ellis would have been delighted by our recollections from last autumn, at least of the genera.

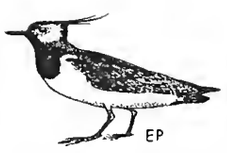
We lunched at a bay called Linkim Shore, amongst the Marram *Ammophila arenaria* and Lyme Grass *Leymus arenarius*, whilst Lesley went to inspect the stands of Rock-rose *Helianthemum nummularium* on the upper part of the cliff, as part of her quest for more Northern Brown Argus sites. Here we also found Cornsalad or Lamb's Lettuce *Valerianella locusta* and Meadow Saxifrage *Saxifraga granulata*. At the end of the beach the Fleur Burn enters the sea. Its dean echoed to the songs of Chiffchaffs, Wrens, Goldfinches and Yellowhammers, all finding nest sites in the dense shrubbery of Blackthorn *Prunus spinosa*, Gorse *Ulex europaeus* and Hawthorn *Crataegus monogyna*. If indicators of the dean's history as old woodland were needed, the Bluebells *Hyacinthoides non-scripta,* Greater Stitchwort *Stellaria holostea* and Dog's Mercury *Mercurialis perennis* were the evidence.

For a while we were forced by the terrain onto the cliff top where agricultural weeds, not usually noticed, such as Sun Spurge *Euphorbia helioscopia* and Common Fumitory *Fumaria officinalis* came under scrutiny. Birds of the farmland also entertained. Skylarks towered in song, Meadow Pipits parachuted into their territories and Linnets exploded from the hedges in twittering parties. By mid afternoon the haar burnt away and at last allowed us views of seabirds : streams of Gannets from the Bass were passing by, both north and south; Guillemot, Kittiwake, Shag and Cormorant were seen feeding at sea; Eider and Heron searched around and on the islets; a Whimbrel began 'bubbling' away, thus solving its own identity; Redshank, Oystercatcher, Curlew, Rock Pipit and Gulls were busy in the coastal strip. During the last couple of miles, the sun shone uninterruptedly and we contentedly entered Eyemouth, turning a blind eye to the intrusive caravan sites. The ferrying of drivers back to Coldingham for a rendezvous with tea and scones began.

And finally an apology – the common pink and white Stonecrop of the coastal rocks was not English Stonecrop *Sedum anglicum,* which is exceedingly common on the west coast. This species is not recorded in this Vice County. It is however the alien White Stonecrop *Sedum album* which has spread rapidly since the last atlas. Thanks to Michael Braithwaite for that information.

Neville Crowther

TWEED WALK



Date 5th May
Leader Eileen Perry

On a glorious sunny and warm day, a party of twenty or so set out for a gentle amble along the Tweed valley. Unfortunately, Eric was unable to join us on this occasion. At the start we dallied for a while on the Manor Bridge to look at the birds along the river, Dippers, Sand Martins and Pied Wagtails among them. We crossed over to walk westwards along the disused railway line. A bank of Wild Strawberries *Fragaria vesca* flanked the steps leading to the walkway, which was bordered by Hawthorn *Crataegus monogyna* about to come into flower, and several shrubs of Red-berried Elder *Sambucus racemosa* distinguished by the conical inflorescences. Spring was well advanced here, as shown by the wealth of plants flowering in the hedgerows: Crosswort *Cruciata laevipes*, Greater Stitchwort *Stellaria holostea*, Marsh Marigold *Caltha palustris*, Bush Vetch *Vicia sepium*, Leopard's Bane *Doronicum pardalianches*, Garlic Mustard *Alliara petiolata*, Cuckoo Flower *Cardamine pratensis* and Water Avens *Geum rivale*.

Birds along the way included Song Thrush, Curlew, Willow Warbler, Woodpecker and Chaffinch. The warm sunshine brought out the Butterflies: Green-veined White, Orange Tip, Red Admiral, Peacock and a host of Tortoiseshell flitting around a Lilac bush. Another touch of colour was added by some iridescent green Beetles *Gastrophysa viridula* found on docken, and a bright orange Rust *Phragmidium sp.* on a Rose bush.

By lunchtime we had walked a mere one and a half miles, such was the variety of interest found on this short section of track. After our picnic we proceeded along to Lyme Station and from there over to the south side of the river, noting here that some Celandines *Ranunculus ficaria* were still in flower and spotting the 3-Veined Sandwort *Moehringia trinerva*.

As we passed the driveway leading to the house of The Barns, we were reminded that we were in the heart of John Buchan country, the house featuring in his historical novel *John Burnet of Barns*.

Further on, the route took us over a stile where some rather friendly horses presented a bit of an obstacle to progress; indeed one took a fancy to the party and accompanied us to the next gate. On return to the riverbank, the resident Peebles Goosanders were seen, also a Heron, several Oystercatchers and Lapwings. The highlights of the day were a nest of three Grey Wagtail chicks, and a 2-spot Ladybird. On a low note, a number of dead White-tailed Bumble Bees *Bombus lucorum* were found lying on the paths; no explanation could be offered for this fatality.

The excursion ended with a taste of Eileen's delicious home baking at Kilcreggan.

Margaret Perry

Tea in the Nature photographer's garden, Bute

Geology lesson, Bute

Birding on Bute

Master class, Tentsmuir

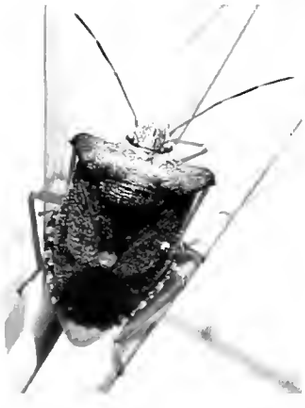
Margaret and her new found friend !

What are they looking for ?
On Bute

Painted Lady

Rust on Juniper

Marbled Beauty on Food Plant



Forest Shieldbug

Bristle Tails, Dunbar

Aphids Feeding

Treble Bar, Linn Dean

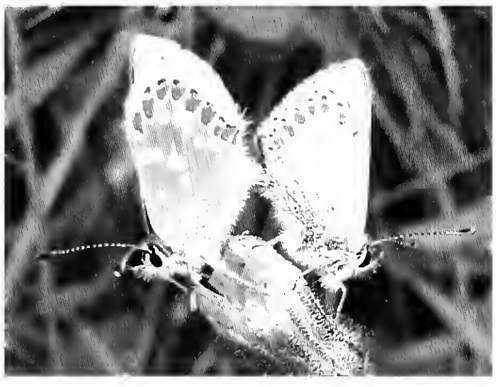
Wood Tiger

Yellow Horned Poppy, Bute

Green Hairstreak on Blaeberry flower

Marsh Fritilary, Bute

Northern Brown Argus, Linn Dean



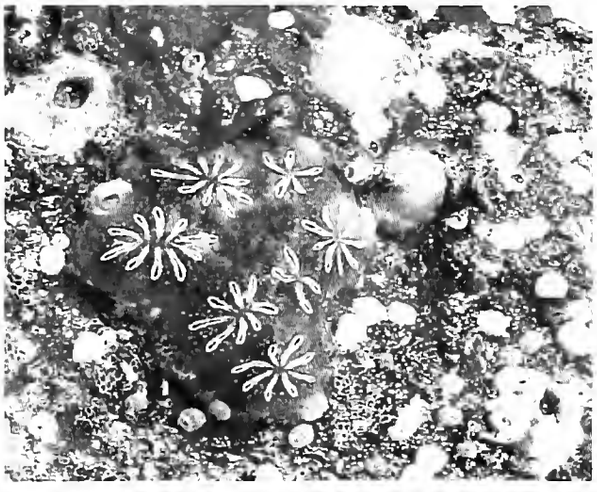
Northern Brown Argus mating

Egg on Rock Rose

Bombus Terrestris showing the queen's sting extruded while mating. This makes it more comfortable for the male.

Grass of Parnassus, Aberlady

Bird's-foot, Bute



Colonial Sea-Squirt. Seacliff
Star Sea-squirt

George has led many excursions since the 1970s. He has taken us to many new and interesting sites.
Very many thanks George.
We always enjoy your outings.

George McDougall

This is how to do it !
Photographing Epipactis helleborine

And this is how to capture the specimen after it has been netted !

Purple Oxytropis, Invernaver

Strange Owls !

White Mountain Azalea

Wood Vetch. Tarmachan

Chequered Skipper,
Gleann Fionnlighe

Small Argent & Sable
Tarmachan

Light Emerald
Palacerigg

Roger Holme adds:

I asked the bee specialists about all the dead *Bombus lucorum*, especially as I had photographed a *B. bohemicus* nearby. Here are their comments for interest:

I'm not sure about the dead B. lucorum that you saw lying around where the B. bohemicus was. It looks to me as though the bee might be near a B. lucorum nest which it had unsuccessfully attempted to invade. Bumblebees tend to pile up dead bees outside the nest to reduce the risk of infection and disease within the colony, and it is possible that the cuckoo bee managed to kill several workers before giving up on the attack. This scenario would also explain the extremely tattered appearance of the bee.

BAVELAW MARSH

Date 9th May
Leader Molly Woolgar

Seasonally it was a coolish day with grey skies but fortunately the rain held off. On the way up to Bavelaw, Molly noticed the readings on her car thermometer, 15°C in Edinburgh but a drop to 11°C by the time we got to Threipmuir car park. Nor was it too cold for the midges – the first I had encountered this season!

A small but merry band of 12 members met at the car park and sallied forth. The first thing I heard as soon as I stepped out of the car was a Willow Warbler, followed by Wood Pigeon, Song Thrush, Blackbird and Robin, all singing and all seen. Through the trees we had a nice view of two Curlew in the field behind the car park, and a Pheasant. As we started along the path, we heard a Cuckoo, first one of the year for me. After this and at varying stages on the walk, we saw Great Tit, Blue Tit, Goldcrest, and I heard Redpoll flying overhead. We reached the bridge, identifying different types of Willow along the roadside. On the water was a nice wee family of Mum Mallard and 14 ducklings. Whether they were all hers will remain an unanswered question! On and around the reservoir and from the hide we had Tufted Duck, Mute Swan, Snipe, Coot, Dabchick, Moorhen, Peewit, Swallow (4), Pied Wagtail, Redshank and two Oystercatchers. The cuckoo was heard again, but sadly not seen. And of course the ubiquitous Black-headed Gull and Herring Gull were ever-present. Kestrel too was seen. The animal kingdom was represented by Roe Deer.

Molly was disappointed at the non-appearance of Great-spotted Woodpecker of which she had good views on her recce earlier in the week. But for me, apart from not seeing Woodcock (this being the first place I ever saw them in my birdwatching career) it was just a lovely evening outing, with lots to see. Thank you, Molly.

And finally, nothing to do with the excursion as a whole, but part of MY evening – I got home to masses of Pipistrelles zipping backwards and forwards past my front door. A lovely finale. And one more thing – Molly – do you remember the torrential rain later that night and how it poured all the next day ?!!

Joanie Fairlie

FALLS OF CLYDE

Date 12th May
Leader Jackie Muscott

It had been a lovely sunny day for the recce, rather less so for the actual outing, so we were not detained by the sight of unusual insects buzzing about on the high banks during our walk down from the car park. On the previous occasion we had spent some time watching Bee Flies *Bombylius major*, large furry flies with a long horizontal proboscis, together with some slim Hoverflies with wasp-like markings. It's a pity they weren't around, but at least we got to the Visitor Centre in good time.

BEE FLIES
Bombylius major

The damp weather also accounted for the lack of Butterflies, but the rich Clydeside flora and the spectacular scenery were there for all to see, and the birds were not too shy. Native woodland plants included Sanicle *Sanicula europaea,* Woodruff *Galium odoratum* once strewn to sweeten the air, Wood Speedwell *Veronica montana*, Goldilocks Buttercup *Ranunculus auricomus* and Dog's Mercury *Mercurialis perennis,* all old-woodland indicators. There were also some alpine woodland plants such as Globeflower *Trollius europaeus* and Wood Cranesbill *Geranium sylvaticum*; and an interesting introduction, an unusual species of Leopard's Bane *Doronicum x willdenowii.*

Marsh and water plants included Meadowsweet *Filipendula ulmaria*, Marsh Hawk's-beard *Crepis palustris*, Marsh Marigold *Caltha palustris*, and the Large Bittercress *Cardamine amara,* which has larger leaves than the related Cuckoo Flower or Lady's Smock *Cardamine pratensis* but smaller white flowers with contrasting purple anthers, when fresh.

Birds included most of the common garden birds plus Treecreeper, Blackcap (though I suppose that's a garden bird these days) and Great Spotted Woodpecker. Swallows were flying overhead, as was the by now universal Buzzard. Mallards were on the water, and both Dipper and Grey Wagtail could be seen on rocks and in the shallows.

Soon we were enjoying splendid views of the various waterfalls, framed by new spring greenery; and then we were up above the gorge where Peregrines have been nesting for several years on the cliffs opposite. A fence has been built to limit the disturbance, but we had some excellent views of the birds through the various telescopes trained on them.

Just beyond the gorge we were able to scramble down to the river, passing as we did so, a beautiful specimen of the Early Purple Orchid *Orchis mascula*. It is a lime-lover, as were many of the plants growing down by the shore - Meadow Saxifrage *Saxifraga granulata,* Hairy Rock-cress *Arabis hirsuta*, Rough Hawkbit *Leontodon hispidus*; and the leaves of Northern Bedstraw *Galium boreale*, another alpine species washed down from the heights.

MEADOW SAXIFRAGE
Saxifraga granulata

At this point some of the party retraced their steps, determined to get a decent cup of tea before the Visitor Centre closed. The rest of us took the high level route, taking in some heathy ground with marshy areas below, and eventually a pond with some interesting sedges, including the Greater Tussock Sedge *Carex paniculata* which, as it grows, forms tussocks several feet high, like small haycocks, with the flower spikes growing out of the top. Little monsters of the marshes.

And so back to the Visitor Centre, just in time to join the others for a welcome cup of tea. Despite the weather it was an enjoyable and interesting day.

Jackie Muscott

FOOTNOTE: THE DAY I WALKED ACROSS THE CLYDE

I once found myself on the far side of the river, having arrived too late to join a fungus foray, and not having much idea where I was. Having wandered about a bit I found myself gazing at a vaguely familiar building across the shallows (I must have seen a picture of the place). Being younger then, happily paddled across, not realising the waters were being held back by the Falls of Clyde hydro scheme, and could have been released at any time. I then found myself in New Lanark. There weren't many people living there at the time; indeed they were busy renovating the place and you could look round for free. I found my way back across the bridge, having followed a trail of discarded mushrooms; but I never did catch up with the rest of the party! *JM*

BIRD SONG IN ORMISTON BIG WOOD

Date 19th May
Leader Lesley Fairweather

A stalwart group of twelve set off from the Hoolets Yett on a very windy but sunny morning – good for our wind turbines and solar panels, but not ideal for bird song. The 'cheese' part of the Yellowhammer theme carried well on the wind but only fragments of the normally repetitive melody of the Song Thrush reached us. Jackdaws were plentiful by the old buildings and two large Hares crouched low in the field – to be seen again on our return. Chiffchaff, Willow Warbler and Blackcap sang for us on the way through the wood – unfortunately no Garden Warbler had the courage to face the wind – but the raucous call of a Jay carried well. The spring flowers were plentiful with Crosswort, Bluebells, Red Campion, Mouse-ear, Stitchwort and white rather than pink Purslane everywhere.

A sheltered spot was found for lunch where Sitka had been felled and which now was being invaded by Silver Birch. Across the field, on the way to look for Whitethroats, Swifts and Swallows were flying low, feeding and calling and displaying well. A few distant notes of the Whitethroat were heard coming from the middle of a Blackthorn thicket on the outside of the wood and this path was followed in the hopes of seeing some sheltering Butterflies. Orange-tip and Green-veined White were observed along with several 7-spot Ladybirds but the crème de la crème was a largish, ragged, bright butterfly that came into view and conveniently stopped on a low branch for all to see – a Comma – not the first to be seen in the area but an extremely obliging one which proved to be the highlight of the day.

Lesley Fairweather

LA CRÈME DE LA CRÈME - A COMMA

NORTH ESK RESERVOIR

Date 26th May
Leader Michael Jones

Carlops was buzzing with life so we manoeuvred through the crowds to park up on the hill road to Fairliehope. With showers dampening the start, sixteen of us began our stroll up the valley of the North Esk. Michael pointed out some of the recent changes in land management that had become apparent in the district. As we had seen on Patie's Hill above us, more beef cattle were being grazed over the hills. Much of the coarse vegetation that sheep would ignore is eaten off, and the beasts are housed over winter to avoid trampling in wet areas. Cock Rig and Spittal Hills are dotted with pens and patches of alien Kale amongst the maze of tyre tracks. These are to house and give shelter to Red-legged Partridge introduced for shooting sport. Our indigenous Grey Partridge has not been seen in the valley for four or five years, and Grouse numbers in the Pentlands have drastically declined over the last ten to fifteen years.

Traditional muirburn, used to manage heather for both grouse and sheep, has been supplemented by cutting by tractor-drawn flail. The regular strips could be seen on the smoother hills where access was possible, but burning is still the preferred option when weather allows.

We soon made a diversion downhill into the North Esk SSSI to look at the mire vegetation beneath the reservoir dam. The expectation of Puss Moths in the planted Aspens was only partially fulfilled. We found several pupal cocoons cemented to tree stakes. Dippers were territorial on the river below the spillway and a Curlew protested at our presence to protect its nest of four eggs in a tussock of Rushes and Meadowsweet. Our quarry however was not strictly avian, as we quickly found Marsh Valerian *Valeriana dioica* and Globeflower *Trollius europaeus*, the scarcest of the many attractive herbs in the extensive mire below the dam.

We lunched on the banks of the reservoir, entertained by the antics of the thousands of nesting Black-headed Gulls. With the collapse of the Bemerside colony in recent years (it used to be the largest in SE Scotland) the importance of Michael's personal wetland reserve was emphasised. A few flotillas of downy Greylag goslings and a couple of whinnying Dabchicks also attracted our attention. A search for Moonwort ferns *Botrychium lunaria* sadly revealed only one, but more success was had with another unusual plant, the Hairy Stonecrop *Sedum villosum*, just beginning to flower in the flushes higher up the valley. After stopping to watch Palmate Newts and Frogs in a pool amongst Pond Water Crowfoot *Ranunculus peltata,* we progressed up to the Henshaw Burn, finding Oak Ferns *Gymnocarpium dryopteris* in a small cleugh and later under deep heather about thirty Lesser Twayblade plants *Listera cordata.* Only a few centimetres tall with a spike of red flowers, they are far more difficult to spot compared to their larger more common cousins. In the same stretch of moor, we were also shown the whereabouts of the oft missed Stag's-horn Clubmoss *Lycopodium clavatum* and the Cloudberry *Rubus chamaemorus.*

But the hour was now late and so we began the tramp downhill in the late afternoon sunshine, grateful for Michael's time, enthusiasm and local knowledge: a much enjoyed day.

Neville Crowther

INVERSNAID

Date 16th June
Leader Joanie Fairlie

This year's bus outing to Inversnaid took place on a typical summer's day for 2007: persistent low cloud and rain. The small road to Inversnaid proved to be busier than expected and all were pleased to arrive at the destination.

One species that proved to be thriving in this wet but not cold summer, was the midge; indeed at times there were so many that members started coughing and choking as the pesky wee craturs found their way into their respiratory systems.

As we walked on the West Highland Way on the loch shore north from Inversnaid, some bird life was observed. Two fledged and still a bit fluffy Dippers were standing on stones on the lochside, waiting to be fed by their parents, and near the boathouse a Grey Wagtail and a Common Sandpiper were seen. A group of half a dozen female Goosanders were close to the shore, while keener eyes identified a male on its own, further out in the loch. Some members heard Garden Warbler and Blackcap singing, and Song and Mistle Thrush were seen, as were a Willow Warbler and a Goldcrest.

As we turned off the West Highland Way and made our way up the Nature Trail, the midges proved even more troublesome, but we were rewarded with great swathes of Common Cow-wheat *Melampyrum pratense.* A Common White Wave Moth was also found resting in the wet grass.

The highest point of the Nature Trail proved to be midge-free and also coincided with a slight improvement in the weather. Nearby a lovely patch of Heath Spotted Orchid *Dactylorhiza maculata* was found, and a Common Carpet Moth. After descending steeply back to the West Highland Way, a number of members continued walking northwards for a short distance. Along the way, a good patch of Wilson's Filmy Fern *Hymenophyllum wilsonii* was found.

An exciting find was fresh Pine Marten droppings in the middle of the path, on a stone, typical Pine Marten behaviour, and proof-positive that they are there, although we didn't see them.

It was a pity not to see the bird specialities of the reserve, Redstart, Wood Warbler and Tree Pipit, but we did hear all of them singing or calling.

Due to the inclement weather, and the resulting disappointing bird observations, an early return was made to Inversnaid. Along the route, Blackbirds, Wren, Robin, Chaffinch, Blue, Great and a party of Long-tailed Tits were seen in the woodland, with Herring, Common and Black-headed Gulls on the loch, along with a few Mallard. House Martins were seen buzzing round the hotel where some members enjoyed afternoon tea.

Due to the early arrival back at the bus, it was decided to stop at the David Marshall Lodge on the way home. Members enjoyed visiting the Osprey cameras which operate there, and some enjoyed the short walk in the woods, to the waterfall. Near to the lodge a good colony of Small Cudweed *Filago minima* was found.

Roger Holme

SEABIRD CRUISE IN CONJUNCTION WITH RSPB

Date 21st June

Leader Grace Jamieson

A very crowded *Maid of the Forth* full of RSPB members and friends, including 10 ENHS members, set off on mid-summer's evening to sail round the River Forth Islands. The leader Alistair Lavery gave continuous commentary during the four hours. It was an eerie beginning with the haar shrouding the bridges almost to water level, and the rumble of ghost trains above us in the greyness. As we cruised past the oil tanker berth off Hound Point, a current hot topic instigated an invigorating discussion about the environmental perils of unloading at such a location.

The 'Puffin Cruise', as it is known by RSPB staff, sailed on regardless into the evening delights where an advantage was immediately discovered. In the concealing mist shrouding Inchgarvie, hundreds of Guillemots suddenly burst into flight as we appeared from the gloom. Further on, tucked into many of the islets such as Haystacks and Car Craig there were Eiders, Shags and various gull species, and remarkably, one breeding plumaged Turnstone. Both our native Seals were seen: 10 Greys and 3 Commons.

Passing Inchcolm Island with its famous Abbey, the stories of early Christian settlements and cells from Iona to the Farnes were described. Beyond, in the open Forth, the haar dissolved and we were in bright sunshine, able to enjoy groups of Auks, Shags and Gannets both flying and feeding.

Approaching Inchkeith, we were greeted by the 'Kee kee kee' calls of a pair of agitated Peregrines. The pair caused quite an excitement; everyone on board delighted in their antics as they circled and dived overhead for the twenty minutes or so of our stay. Other delights to savour were many Cormorant nestlings on their nests, Puffins popping out of burrows on the top of the island, and Gulls and Corvids swirling around in the melee of many bird species in and above the water.

As we headed gently back up-river admiring a flock of 20 Greylags flogging past us at wave height, bound for East Lothian, a big black shape suddenly flashed by initiating cries of 'Bonxie!'. A more sober judgement of 'dark phase Arctic Skua' was reached quite quickly - still a great 'tick'.

After all the thrills of the evening the boat neared Inchmickery, an RSPB reserve, where Fulmars and Common Terns were prominent, but alas no Roseates! Young Oystercatchers, still in down, skulked in the gullies on the cliffs. And after passing the discharging tankers once more we all too soon reached the jetty at South Queensferry, chilly but warm with satisfaction.

Grace Jamieson and Neville Crowther

LAIRIGE CLIFFS, TARMACHAN

Date 23rd June

Leaders Jackie Muscott and Mary Clarkson

Our Alpine Meeting this year did not involve a lot of climbing, since the lower part of the Lairige cliffs on the east side of Meall nan Tarmachan, near Killin, are easily approached from the car park by the Lairige Dam. Even better, the area has been fenced off from grazing animals for a number of years, chiefly to encourage the spread of Willow scrub, particularly the rare Mountain Willow *Salix arbuscula*, but having the side effect of allowing many of the plants to descend from the cliffs to the grassy slopes below. It is getting a bit overgrown now, however, and some controlled grazing may be necessary in future.

The weather was not promising in Edinburgh that morning, but those who made the journey found things had improved by the time they reached the hills (contrary to normal practice), and though the day was overcast it was mainly dry, and the cloud well above us. Angus and Liz who had come over from Bute had the reverse experience, leaving sunshine for clouds.

We started by examining some rocky outcrops beside the road which were so interesting that it was some time before we could get everyone to move on. The Moss Campion *Silene acaulis* and the Purple Saxifrage *Saxifraga oppositifolia* were both over, but Yellow Saxifrage *Saxifraga aizoides* was just coming into flower. Ferns included Moonwort *Botrychium lunaria,* Green Spleenwort *Asplenium viride* and Holly-fern

Polystichum lonchitis. The distinctive Alpine Dog Lichen *Peltigera leucophlebia,* which is bright green with a touch of orange on the underside, was found in a rock crevice and the small alpine Three-flowered Rush *Juncus triglumis* in a wet patch.

A delightful find in the grass by the reservoir was one of our daintiest little sedges, Hair Sedge *Carex capillaris*. Then it was over the dam to the cliffs and the colourful alpine meadow beneath. Early Purple Orchid *Orchis mascula*, Globeflower *Trollius europaeus* and Mossy Saxifrage *Saxifraga hypnoides* have all come down from the cliffs, to grow amongst Wood Cranesbill *Geranium sylvaticum* and Water Avens *Geum rivale* and other attractive herbs and grasses. The wet area by the reservoir was golden with Yellow Saxifrage, mixed with Starry Saxifrage *Saxifraga stellaris* and Mountain Sorrel *Oxyria digyna* all swept down the mountain streams.

We had to approach the cliffs to see Roseroot *Sedum rosea*, Alpine Cinquefoil *Potentilla crantzii* the rare Alpine Saxifrage *Saxifraga nivalis* probably the highlight of the day, and a stand of Melancholy Thistle *Cirsium heterophyllum*. It was while approaching the cliffs that we became aware of a noisy bird: a Peregrine nesting there. It is a bird that certainly makes its presence known, and is quite prepared to take on something larger than itself. Once in Spain I was amazed to see a pair of Peregrines harassing Griffon Vultures at their nesting site.

Below some of the larger cliffs there were a number of woodland plants which are not uncommon in the shade of high-level rocks rather than among trees: Wood Anemone *Anemone nemorosa*, Red Campion *Silene dioica* and Dog's Mercury *Mercurialis perennis*, not to mention great sheets of Wood Vetch *Vicia sylvatica*. There were plenty of marsh plants too in the wetter areas: over a dozen sedges, Meadowsweet *Filipendula ulmaria*, Valerian *Valeriana officinalis*, Marsh Hawk's-beard *Crepis paludosa* and colourful patches of Bugle *Ajuga reptans,* which seems to have done very well this year; it likes it wet.

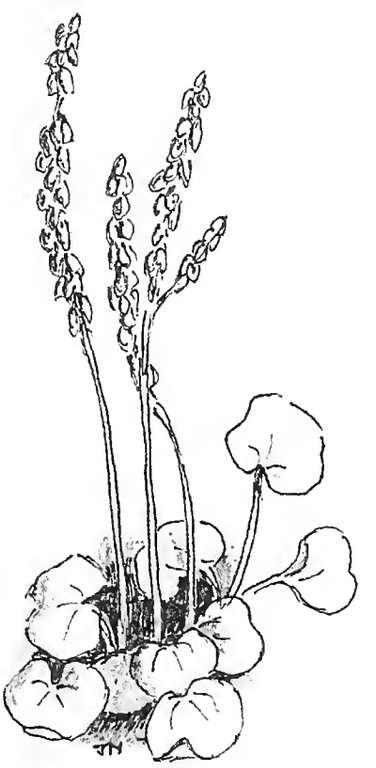
There were lots of little frogs around, but it was not a good day for insects. We saw a couple of Small Heath Butterflies and some Green-veined Whites, and Roger and Neville identified a number of moths and bees, the most exciting of which was the Heath Bumblebee *Bombus monticola*. We also caught glimpses of some brown lepidoptera which were probably Northern Eggar Moths; I certainly saw them next day and I had seen them on the site in previous years.

All in all it was a good day and we could not have been luckier with the weather; we later learnt that just a few miles east of us they had torrential rain, while we had scarcely a drop!

Jackie Muscott

THREE-FLOWERED RUSH *Juncus triglumis*
(sometimes two-flowered) in a wet patch

ALPINE SAXIFRAGE
Saxifraga nivalis



MOUNTAIN SORREL
Oxyria digyna

INVERESK LODGE

Date 27th June
Leader Margaret Perry

After days of dull and wet weather the sun came out for us on this rather cold June evening. A party of some sixteen members assembled to view the garden at Inveresk Lodge. The house dates from the 17th century. One of the later owners, Sir John Wedderburn, was famed for being hanged as a Jacobite rebel. In 1959 the Lodge was presented to the National Trust for Scotland by Helen Brunton whose family had owned the property since the early 20th century. The garden, which had been used for growing vegetables during wartime, was then in a neglected state and has since been carefully restored. It is delightfully situated, ancient walls providing a sheltered microclimate for the more tender plants. The national collection of *Tropaeolums*, exotic climbing plants related to *Nasturtiums*, is housed in the conservatory and in the sheltered border.

The area at the bottom of the garden is given over to a less formal meadow, knee deep in thriving Yorkshire Fog *Holcus lanatus*, and a pond complete with dipping platform. The most striking plant here was the Flowering Rush *Butomus umbellatus* with its umbels of pink flowers on long stalks. They were just visible amongst the abundant Bulrush *Typha latifolia* and Lesser Bulrush *Typha augustifolia*. These two species were easily distinguished by the formation of the flower heads, the former having male flowers located directly above the female flowers and the latter having a distinct gap between the two reproductive parts. There were also some White and Yellow Water-lilies *Nymphaea alba* and *Nuphar lutea*, and Irises *Iris pseudacorus*. The tadpoles swimming around were observed to have developed limbs by this time of the year.

We then went on to make a short circular tour along the River Esk as far as the main line railway, around a field of barley and uphill towards Inveresk Lodge. At the start we passed the handsome Manor House, dated 1748, and took the path down towards the river. Amongst the lush vegetation bordering the river were several umbels: Rough Chervil *Chaerophyllum temulum* and Ground Elder *Aegopodium podagraria* in flower, Sweet Cicely *Myrrhis odorata* with its prominent blackened pods, and Cow Parsley *Anthriscus sylvestris* also in seed. There were still some remnants of flowers, which had been abundant a few days earlier, on Dame's Violet *Hesperis matronalis* and Russian Comfrey *Symphytum x uplandicum*. The bushes of Elder *Sambucus nigra* on the other hand were in full bloom. Huge stems of the Giant Hogweed *Heracleum mantegazzianum* lent a touch of the surreal to the scene along the railway embankment. The adjacent path was bordered by some fine specimens of Thistles: Welted *Carduus crispus*, Creeping *Cirsium arvense* and Spear *Cirsium vulgare*.

The party enjoyed this summer evening's stroll in the pleasant surroundings of Inveresk. Our thanks are due to Peter Daly, the head gardener, who kindly came to open the garden for us after hours.

Margaret Perry

UNION CANAL & ADDIEWELL PONDS

Date 30th June
Leader Betty Smith

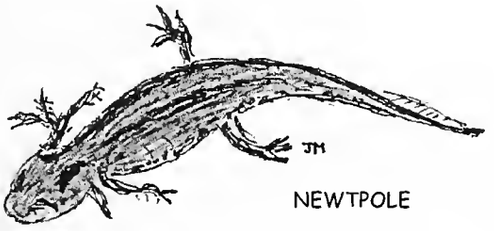
Most of northern England seemed to have been flooded for days, and the weather forecast for Scotland was a dismal continuation of this pattern concluding the wettest June on record. So, an activity like pond dipping seemed quite appropriate. Betty had planned to take us back to some of her haunts of yesteryear and we were to begin on the Union canal west of Ratho. Seven hardy individuals assembled near to Clifton Hall school as the rain began to spot our clothing. Janet Watson was most appropriately equipped, wearing a bright blue hooded plastic gown which had last seen service on the boat trip beneath Niagara Falls.

Since the Millennium year, when the canals of central Scotland were renovated and reopened to barge traffic, the diversity of more than a decade ago has declined considerably. It was immediately obvious that our interest would not be sustained for long, when each netful produced scores of Water Lice *Asellus sp.* and dozens of Pond Snails *Lymnaea sp.*, but little else. As only the lowest layers of the potential feeding pyramids were represented, it confirmed our view of a much impoverished community. The one bright spot that morning was finding a micro-moth called the Small Magpie *Eurrhypara hortulata* which flitted around in the Reed Sweet Grass *Glyceria maxima*. Despite its classification it was not 'micro', but it was colourful.

And so we moved west to Addiewell Ponds, just beyond West Calder. This delightful site is hidden from view behind the east-west railway line and approached rather hazardously through fields of cows, over barbed wire fences, through a culvert and over a small stream. The rain now abated for an hour or two. Tufties, Mallard and Dabchicks were nesting. Bird song entertained us at lunch. Early Ringlet Butterflies, a single female Ghost Swift *Hepialus humuli*, Yellow Shells *Camptogramma bilineata*, Latticed Heaths *Chiasmia clathrata* and Plumed Moths *Pterophoridae* all added to our excitement. The meadow on the south side was brimming with orchids in their prime – Greater Butterfly *Platanthera chlorantha*, Common Spotted *Dactylorhiza fuchsii* and Twayblades *Listera ovata*; and we were constantly distracted by discovering new stands as we progressed around the banks. Betty was at last able to indulge her passion for Odonata as we captured flying adults and larval Common Blue Damsels *Enallagma cyathigerum*, the odd Blue-tailed Damsel *Ischnura elegans* and finally, in

the third pond visited, nymphs of Common Darter Dragonflies *Sympetrum striolatum*. The rain was again beginning to pound down, but the identification demonstrations were not neglected. The discovery of Sticklebacks and Newt tadpoles prolonged our discussions. Once the explanations were concluded we fled back to our cars, having for the most part cheated the weather forecasters.

Neville Crowther



NEWTPOLE

COCKMUIR VERGE, MIDLOTHIAN

Date 4th July
Leader Neville Crowther

A cloudburst of grandiose proportions engulfed southern Midlothian about an hour before we were due to begin. Although the rain had by then ceased, I drove unenthusiastically to Mount Lothian. As I parked in the wet grass beside the old lime kilns I was not expecting anyone to show interest in the excursion. How wrong can you be? There had been little rain in Edinburgh and soon there was hardly room to park. Fifteen people eventually arrived.

My interest in this unfrequented cul-de-sac on the edge of Borders region was initially in the SWT-protected roadside verge which I had enjoyed overseeing for many years. Its rich assemblage of plants is due largely to the outcropping of limestone across this high plateau and the subsequent mixture of calcareous grassland and mires near to the Fullarton Water which the road crosses.

During this wet summer grasses had flourished and now, in flower, provided swathes of varied colour and form. Quaking Grass *Briza media* and Wavy Hair-grass *Deschampsia flexuosa* were the most abundant, but Yellow Oat *Trisetum flavescens*, Crested Dog's Tail *Cynosurus cristatus* and Red Fescue *Festuca rubra* added contrast. Healthy clumps of Twayblade *Listera ovata* flowered rather obscurely amongst the grasses, their numbers only apparent when the eyes became atuned. Melancholy Thistles *Cirsium heterophyllum,* numbered in scores, thrust their purple capitula clear of the ruderals such as Nettle and Hogweed. A fifty metre stretch of verge contained dozens of Adder's Tongue Ferns *Ophioglossum vulgatum*, only visible by delving into the wet grass.

We disturbed plenty of moths, mostly Geometers which Roger pounced upon, ending with a quite impressive list considering the conditions: Yellow Shell *Camptogramma bilineata*, Silver Ground Carpet *Xanthorhoe montanata*, Green Carpet *Colostygia pectinataria*, Barred Straw *Eulithis pyraliata*, Latticed Heath *Chiasmia clathrata* and lots of 'micros'. The only Butterflies seen were Ringlets which had only emerged about a week before. The site is one of the few in the Lothians where Dark Green Fritillaries survive, but we were a little early. The threatening weather may have kept the Skylarks and Meadow Pipits quiet, although we did see a family of Stonechats and heard distant Peewits and Oystercatchers. Large flocks of juvenile Starlings swooped across the fields, but most birds remained unseen.

One low-lying piece of roadside had years ago received the cast-offs from someone's garden. Now these exotics have merged colourfully with the native, creating interest and delight. Johnson's Blue Geraniums, Perennial Cornflowers, Montbretia, Pearly Everlasting and Yellow Garlic were notable.

Two of the steep roadside banks particularly had many distinctive calcicoles. Prominent amongst them were Rough Hawkbit *Leontodon hispidus*, Lady's Bedstraw *Galium verum*, Purging Flax *Linum catharticum*, Flea Sedge *Carex pulicaris*, Glaucous Sedge *Carex flacca* and Bloody Cranesbill *Geranium sanguineum.* Strangely mixed in with all this there were calcifuges such as Heath Bedstraw *Galium saxatile*, Tormentil *Potentilla erecta*, Heath Grass *Danthonia decumbens* and all three heathers.

When we arrived at the bridge over the Fullarton water, although not strictly part of the verge, we overlooked a most exciting community in Cockmuir Marsh. *Dactylorhiza* Orchids of three species were present in large numbers, many of which we suspect were hybrids. Although the Globeflowers were now over, lots of additional colour came from Marsh Marigolds *Caltha palustris*, Ragged Robin *Lychnis flos-cuculi*, Marsh Lousewort *Pedicularis palustris* and Meadowsweet *Filipendula ulmaria.* Less prominent but distinctive components of the mire community were Marsh Arrowgrass *Triglochin palustre* and Fen Bedstraw *Galium uliginosum,* both indicators of calcareous fens. Jackie squeezed through the fence to brave the unknown and returned triumphantly with a sample of a Small Reed *which turned out to be a rarity - Calamagrostis x gracilescens* - a new record for the Lothians.

We strolled back to our cars with increasing urgency as the clouds darkened and raced in from the west. As we drove away we left complete double rainbows behind us, above our pot of gold.

Neville Crowther

PRESTONHALL

Date 7th July
Leader George McDougall

The day dawned fair ... promising great things after such a long spell of miserable, wet and changeable weather.

Prestonhall near Pathhead in Midlothian is an impressive estate, entered through massive pillared gates topped with twin guardian lions. Prestonhall House, set amid wide lawns and an extensive parkland of fine trees, dates back some 300 years and is exceptionally fine architecturally, having been improved and extended by William Adam at the end of the 18th century.

There was a large turnout of Nats for the visit, which had been arranged and was led by George McDougall, who was in fine fettle.

Prestonhall's owner, Major Callander, welcomed us with a short talk on historical, architectural and arboricultural features of the house and grounds, while a family of Pied Wagtails foraged for insects on the lawn. On an autumn visit some years ago, that lawn had been populated by large numbers of *Hygrocybe calyptraeformis*, the Ballerina fungus. A Spotted Flycatcher distracted us with aerial manoeuvres over a freshly-cut meadow, and a Kestrel hovered distantly over the trees.

Our first stop was to inspect the giant Prestonhall Beech, 100 feet tall and 22 feet in girth, which had shed one of its most massive branches in the New Year gales. A Hare was sitting clamped down in the long grass by the side of the drive. Several of us passed by before it got up and galloped off.

A Sparrowhawk soared overhead on a display flight, and a Buzzard was heard calling. Among other birds on the estate, Major Callander reported that there are Barn Owl and Treecreeper, and he had introduced Grey Partridge to try to help the recovery of the species locally.

The parkland holds many ancient trees; some, like the Prestonhall Beech, possibly date back to the original establishment of the estate. These have been augmented by a considerable number and variety of specimens of later and recent planting.

Strengthening sunshine tempted out a number of Ringlets and a couple of Meadow Brown Butterflies.

Not far from the house is a huge walled garden, surrounded by 12 foot brick walls, still in good order, and topped at intervals with stone carvings of thistle and rose. The garden is now totally overgrown and not accessible, but before lunch we explored an extensive area of former garden lying just outside. Here we found a dense stand of bright green attractive foliage. It turned out to be a Knotweed - not the usual Japanese species but the less common Himalayan *Polygonum wallichii*. In abundant flower was a large orange *Meconopsis* and a glorious large red *Tropaeolum* was festooning part of the hedge. There were also large clumps of unusual (unidentified) herbaceous plants, seemingly survivors of what must formerly have been a fine border.

There were also rambling roses and a bush which was identified as Bladder Nut *Staphylea pinnata* with strange bifurcated green bladders, each containing a single seed. This grassy area was an ideal picnic site and several Nats sat down and opened up their lunch boxes.

I had to leave the excursion at that point but, on my way, Major Callander showed me two fine spikes of Helleborine in long grass close to the house. Apparently it has been growing there for many years, though never increasing in number .

On my way home the heavens opened and I wondered how the picnic fared.

Tom Delaney

We had a rather damp lunch and unfortunately our afternoon walk was shorter than planned. Ed.

FUNGI AT PRESTONHALL

Throughout the walk several specimens of fungi were pounced upon with joy and wrested from their moorings. Some were readily identifiable on the spot, but those less so were despatched for confirmation or identification to Elizabeth Farquharson and her painstaking work with the microscope. Inevitably there had to be a few that remained nameless, either because of their condition, or for some other reason.

Around the base of the giant Beech we found innumerable *Marasmius rotula* - a dainty little fungus with the gills neatly attached to a well-defined ring underneath the cap. Nearby were two specimens of *Amanita rubescens*. One was well into maturity, showing the typical pink colouring throughout, which leads to it being named The Blusher; while the other was in the earlier stage of a small mound showing the crusting on the cap. In the older specimen, the volva, (typical of any *Amanita)* had already disintegrated. Among others identified on site or later were: *Russula cyanoxantha* (under Beech, *Polyporus varius* and also *Auricularia auricula-judae* (each on dead twigs under Horse Chestnut), *Collybia confluens*, *Coprinus plicatilis*, *Inocybe napipes* (make sure to get the base of a fungus if you would like it identified), *Marasmius oreades* (very dried out but revived when placed in water), *Boletus chrysenteron* (supposedly edible!), *Rickenella fibula*; *Panaeolus rickenii*, *Polyporus squamosus*, and *Ganoderma australe*.

Eunice Smith

TREES AT PRESTONHALL

Severe storms at New Year 2007 broke away a large limb from the Prestonhall Beech *Fagus sylvatica.* This 250 year old tree, which stands just SE of Prestonhall

House, originated in the time of the Scottish Enlightenment, when landowners all over Scotland, but particularly in the Lothians, were planting shelter belts, largely of Beech. It is listed in the Forestry Commission's *Heritage Trees of Scotland,* published in 2006.

Veitch's Silver Fir *Abies veitchii* is a Korean tree with striking purple-black cones which stand upright from the branch, like all *Abies* species. Nats members may remember seeing examples at two locations last year at Dawyck and the Korean War Memorial in Beecraigs, West Lothian.

Cedar of Lebanon *Cedrus libani* had the greatest girth of any trees seen that day c.10.5 metres, measured with arm-spans! There were two species of Southern Hemisphere Beeches *Nothofagus sp.* - part of the Gondwanaland flora. I couldn't confirm the identity of either, although I suspect they were Raoul *N. procera* from Chile, with the large leaves; and Red Beech *N. menziesii* of New Zealand, with the small leaves with blunt teeth.

There were at least two Monkey Puzzles *Araucaria araucana* which are Chilean in origin too. A Walnut tree *Juglans mandschurica*, again from Korea, had very aromatic foliage.

A Tulip tree is either *Liriodendron chinense* or *tulipifera* - I think it may have been the former, given Henry Callander's army connection with Korea and Panmunjom, although it has always been very rare. The latter is North American, and has been planted in UK since c.1650AD. It is an ancient tree with a paleontological record extending to the Cretaceous where it had a world–wide distribution. It is often cited as an example of relict evolutionary distribution (like camels).

A small tree with delicate grey-green foliage and red bark was the Japanese Red Cedar *Cryptomeria japonica.*

One of the largest trees visible from the house is a Black Pine *Pinus nigra* with needles in twos. Nearby are to be found the Weymouth Pine *Pinus strobus* and Bhutan Pine *Pinus wallichiana,* both with 5 needles per short shoot, although the latter has very long needles c.12-15 cm.

Neville Crowther

..... HARE CLAMPED DOWN

ROYAL MILE

Date 11th July
Leaders Betty Mitchelhill and Sandra Stewart

It was a pleasant evening for a stroll down the High Street, looking at building stones and considering what life must have been like in the cramped old town. Before we set off from the Esplanade we looked over to Arthur's Seat and wondered at the volcano which erupted about 340 million years ago. We considered the changes which erosion and deposition have made, and thought about the shaping of the landscape by the ice sheets which left the classic crag (the Castle Rock); the troughs of the Grassmarket and the Gardens; and the ridges of the High Street, Princes Street and Lauriston Place, all of which dictated the form of the original settlement. As we set off we thought about the city's water supply from Comiston Springs which came into the reservoir on the Esplanade, (only recently emptied and turned into a tourist shop) and on down to supply the wells and the wealthy down the High Street. As we walked down the Street examining the stones, we made several stops to think about the lives of the people in the very restricted area, down to the Netherbow , the east gate of the city, and on down to the striking new building of the Scottish Parliament

Sandra Stewart

The earliest buildings, which were made of wood and thatch, were a real fire hazard so gradually more and more stone was used. The first stone was quarried (or even just collected) from the immediate neighbourhood. Little if any trace of these first small quarries can be found, but sometimes we do know where they were. For example, in the 16th century a woman was sentenced to be drowned in a quarry hole, which must have been where the junction of Candlemakers Row and George IV Bridge now is. We can still see evidence left by small quarries in Bruntsfield Links.

As time went on, stone was brought from farther afield, for example from Cullator Quarry near Aberdour, Fife. It was brought across by boat. On this side of the Forth the well-known quarry at Craigleith was opened up. We looked at the various ways this stone was used. At first little or no work was done on the stones and they were used in a random manner. Then gradually size and shape was considered, the stone being worked and set to form courses. Sometimes it was only the front of the building which was coursed, and we could see that the side was still random rubble.

Gradually the ways in which the stone was worked increased. We looked at that and also at how the surfaces were finished by using decorative chisel work. We compared ancient and modern buildings. The most obvious was John Knox House and next to it the Storytelling Centre – very different but blending well together, with the new building retaining some old

features. We went down to the corner of St Mary's Street and looked back to the bell tower of the new building. Looking up we could see the bell commissioned by Edinburgh Council in 1621. It came from Middleburgh in Holland and was cast by Michael Burgher-Huis.

As well as the buildings we looked at the road and the pavements. These, of course, are fairly recent and stone has been brought in from a distance. Attractive patterns have been made by using different coloured granite setts and placing them to make patterns. Most of the pavements are of Caithness flagstones, a stone which splits easily to give shallow slabs – ideal for pavements. This is a sedimentary stone and the kerbs are of the stronger igneous stone, dolerite.

There is much to be seen in the Royal Mile and hopefully we will in future look with more seeing eyes.

Betty Mitchelhill

LINN DEAN

Date 14th July

Leader Neville Crowther

This SWT reserve is noted for its rich variety of plant species and invertebrates in a complex of unusual vegetation communities. It lies, mostly hidden from view, in the shadow of the wind turbines by the busy A68 at Soutra Isle. The small lay-by was soon jammed with our cars before our party of 25 set forth.

In the north, where the dean is steep sided and rocky, calcareous and mesotrophic grassland predominates, with a flourishing Juniper scrubland. The flowering herbs produce a kaleidoscope of colour on the slopes with a south-west aspect. Particularly notable were Rock-rose *Helianthemum nummularium*, Thyme *Thymus polytrichus*, Lady's Bedstraw *Galium verum*, Purging Flax *Linum catharticum*, Rough Hawkbit *Leontodon hispidus*, Hairy Stonecrop *Sedum villosum* and grasses such as Quaking Grass *Briza media*, Meadow Oat *Helictotrichon pratense*, Heath Grass *Danthonia decumbens*, Early Hair Grass *Aira praecox* and the rare Mountain Melick *Melica nutans*. It is here that the insect life is unusual, with the best colony of Northern Brown Argus in the Lothians, Dark Green Fritillaries, and moths such as Treble Bar, Barred Straw and Chimney Sweepers. At least four species of Ladybird were recently reported, associated with the Juniper. Also numerous were colourful capsid bugs, bees and hoverflies active in the sunshine. We didn't need to search too carefully for the Northern Brown Argus Butterflies, which we found mating and egg laying on the Rock-rose. The health of the population was pleasing, considering their precariousness at many Lothian sites. Other Butterflies recorded were Ringlet, Meadow Brown, Red Admiral, Peacock, Green-veined White and Common Blue.

Further downstream, at the extreme northern part of the reserve and almost inaccessible, is an area with many unusual Mosses and Liverworts beneath hanging fragments of woodland communities. It was here that Otter spraints and Badger latrines were found by the burn on my initial visit.

The dean in the south is flanked by both acid and calcareous mires, rush pastures with bright assemblages of Early and Northern Marsh Orchids *Dactylorhiza incarnata & purpurella*, Ragged Robin *Lychnis flos-cuculi*, Marsh Lousewort *Pedicularis palustris*, Fen Bedstraw *Galium uliginosum*, Marsh Cinquefoil *Potentilla palustris*, Marsh Arrowgrass *Triglochin palustre*, Kingcups *Caltha palustris*, Marsh Violet *Viola palustris*, Lady's Smock *Cardamine palustris*; a host of Sedges *Carex disticha, echinata, pulicaris, panicea, flacca, viridula and nigra*, in the midst of the dominant Rushes *Juncus spp.;* and Meadowsweet *Filipendula ulmaria*. The flatter land on the western and eastern shoulders of the dean are of montane acid grassland communities, with some blanket bog variously dominated by Wavy Hair Grass *Deschampsia flexuosa*, Mat Grass *Nardus stricta*, Heath Rush *Juncus squarrosus*, Sheep's Fescue *Festuca ovina* and Common Bent *Agrostis capillaris*.

As a footnote, this unremarked but diverse end of the reserve is currently the proposed site of an access road to yet another windfarm to the east. It is hoped that negotiations at present being entered into will maintain complete protection for this wonderful site. It is perhaps worth relating that, for inexplicable reasons, Linn Dean, once an SSSI, was denotified about 20 years ago. The justification for such a decision is hard to fathom, or is it ?

Neville Crowther

The rare MOUNTAIN MELICK
Melica nutans

NAMELESS BURN

Date 21st July
Leader Michael Braithwaite

A party of 16 met near Threeburnford in damp conditions to walk up a nameless burn. We were accompanied by one of the owners, Mrs Patricia Glennie. Meadow Fescue *Festuca pratensis* was in flower by the burn before we came to the recently replanted cleuch woodland. There was some debate on whether Gean *Prunus avium* would have been native in such a place, but some ripe cherries were gathered before we descended a steep rough bank to ford the burn.

This brought us to a superb bank of flowers dominated by Rock-rose *Helianthemum nummularium*, though slightly encroached by Bracken *Pteridium aquilinum*. Although the rain was not conducive to finding butterflies or moths Jean Long found the eggs of Northern Brown Argus *Articia ataxerxes* and a resting female was soon spotted by Roger Holmes. (Joanie's Photo - photo page 3) This is an exciting new record for the site. Other *lepidoptera* seen included Yellow Shell *Camptogramma bilineata*, White Wave *Cabera pusaria*, Clouded Border *Lomaspilis marginata*, Large Yellow Underwing *Noctua pronuba*, Chimney Sweeper *Odezia atrata* and several Common Blue *Polyommatus icarus* Butterflies. Both native and planted specimens of Juniper *Juniperus communis ssp. communis* were passed as we climbed back out with some exertion, and more was seen from above. Near the Juniper there was a fine grove of tall Aspen *Populus tremula,* and the party was amazed to hear that these had been but a few short scrubby plants just a decade ago: the suckers had come away as soon as grazing was removed. Wood Cranesbill *Geranium sylvaticum* was flourishing in the wood, as was Common Spotted Orchid *Dactylorhiza fuchsii.*

The bank above the wood proved very interesting grassland, notable for the variety and abundance of Waxcap fungi, seven species including Parrot *Hygrocybe psittacina* and Blackening Waxcap *H. conica.* Additionally there were two species of Fairy Clubs *Clavariaceae,* also indicative of unimproved grassland.

Flowering plants present included much Mountain Pansy *Viola lutea* with yellow, purple and mixed colour forms present. Eyebrights *Euphrasia spp.* were plentiful, and the presence of the Sedges *Carex caryophyllea* and *C. pilulifera* in fairly close proximity illustrated the mix of soil reaction types.

Upstream of the wood there is a series of springs, and the associated flushes bear a particularly rich flora notable for the abundance of Red Rattle *Pedicularis palustris* and Yellow Rattle *Rhinanthus minor, ssp. minor* rather than *ssp. stenophyllus* which might have been the subspecies to expect in such a habitat. Tawny Sedge *Carex hostiana* and Few-flowered Spike-rush *Eleocharis quinqueflora* were other notables, but the star species present was Globeflower *Trollius europaeus* (there is another colony in the wood).

We took lunch with our backs to the dyke before exploring up the burn where Marsh Valerian *Valeriana dioica* was present. A walk up the hill to the vice-county boundary took us to a site where Moonwort *Botrychium lunaria* had been reported. Alas the grass was too long for that species to have much chance, though more Mountain Pansy and Spring Sedge *Carex caryophyllea* were seen there with Pale Sedge *Carex pallescens* in wetter ground nearby. Returning down the hill we passed a field of young grass in the process of being topped to remove a remarkable flowering of Hemp-nettles, including thousands of the fine Large-flowered one, *Galeopsis speciosa.*

When we came to the farm Mrs Glennie most kindly invited the party in to tea and cake, an exceedingly welcome surprise as we were rather chilled. We went home with happy memories of the silver teapot.

Michael Braithwaite

PALACERIGG COUNTRY PARK

Date 28th July
Leader John Watson

Palacerigg lies within North Lanarkshire about 2 kilometres from the outskirts of Cumbernauld New Town. Although there is not, and never was, a Palace, and not much ancient history to be found, the area has an interesting recent past.

In 1905 the Glasgow Relief Committee bought the land to establish a Farm Colony for unemployed men. Initially there was a workforce of 90, staying for 8 weeks and receiving 8 Shillings, plus One and Sixpence for each child, weekly. By 1908, however, with worsening economic conditions the numbers had increased to 800 colonists who were transported daily from Glasgow in special trains. Locals would have witnessed 800 marchers going up the hill to Palacerigg in the morning and then back down again in the evening. By the 1930s it was 26 busloads!

In addition to farming, the colony undertook peat extraction, and in 1923 established an extremely successful firelighter factory.

Cumbernauld New Town purchased the 40 hectare site in the early 1970s in order to establish a Country Park, and they planted more than 100,000 trees and shrubs. The Park was later acquired by North Lanarkshire Council. The central area of the Park (around the Visitor Centre) contains an extremely popular rare breeds farm but, fortunately for the naturalist, the periphery of the Park consists of a number of linked nature trails which are less frequented and, indeed, our party encountered hardly any of the 'Madding Crowd'.

So off we set, our party being 23 strong. The day was overcast and although the sun never quite shone, neither did it rain more than half-a-dozen drops, and it was warm enough for insect activity. After starting off along the Treetop Walkway (we never saw the claimed view of Arran) we next followed the Laverock Trail which contained a mix of woodland and meadow, with a burn and small pond. There were some excellent finds along this stretch including Broad-leaved Helleborine *Epipactis helleborine* (a patch of twelve in tiptop condition and endlessly photographed), Lesser Knotweed *Persicaria campanulata* (a garden escape) and Common Spotted Orchid *Dactylorhiza fuchsii.* The Moths were: Clouded Border *Lomaspilis marginata*, Common White Wave *Cabera pusaria* and Shaded Broad-bar *Scotopteryx chenopodiata.* The rare Streaked Ladybird *Myzia oblongoguttata* and Large Red Damselfly *Pyrrhosoma nymphula,* were also found, as were several fungi including *Polyporus varius, Russula ochroleuca* and *Amanita rubescens.*

The next stretch of path was the Toddlemoor Trail, a track winding along the edge of an expanse of moorland whose hags and hollows made it quite hazardous to walk over. We were delighted to find Lousewort *Pedicularis sylvatica*, Angelica *Angelica sylvestris,* Dotted Loosestrife *Lysimachia punctata*, Cranberry *Vaccinium oxycoccos*, Goldenrod *Solidago virgurea* and on a rubbish heap, Red Goosefoot *Chenopodium rubrum.* The Heather was in full bloom and there was a goodly number of moths active on it, including Small Argent and Sable *Epirrhoe tristata*, Barred Straw *Eulithis pyraliata*, Large Yellow Underwing *Noctua pronuba*, Common Carpet *Epirrhoe alternata*, Smoky Wainscot *Mythimna impura,* Straw Dot *Rivula sericealis* and the Micro *Udea lutealis.*

Our day was rounded off by a walk, via Fannyside Loch, to the Lint Cobble Trail. The Lint Cobbles were the ponds/puddles where, formerly, flax was steeped (retted) to separate out the linen fibres. There is a good, recently made, small loch here, which will make an excellent habitat when it matures.

There were lots of trees, needless to say: a mix of plantation conifers, mature Beeches and maturing native broadleaves, including some Bird Cherry *Prunus padus*, Cherry Plum *Prunus cerasifera*, Hornbeam *Carpinus betulus* and Field Maple *Acer campestre.* We also admired the enormous cones on a Noble Fir *Abies procera.* There was a lot of Blackthorn *Prunus spinosa,* much of it with galls on the leaf edge, courtesy of the mite *Eriophyes prunispinosa.*

A day with lots of interest, with the brownie points surely going to the Helleborine, the Cranberry and the Streaked Ladybird. One group of Nats were captivated by a quite fearless fledgling Robin which 'adopted' them, approaching to within a couple of feet.

John Watson

BARNS NESS

Date 4th August
Leader Grace Jamieson

Saturday 4th August was summer! We had sunshine, blue sea and sky, a warm though strong wind, and high above, a lovely patch of cirrus cloud, such a contrast to the grey blanket which has both covered and drenched us all summer. So a very cheerful group of 25 Nats set out to explore Barns Ness.

First of all, a visit to the pond to look for dragons and damsels ---flies. We saw water fleas, the Common Darter and Common Blue Damselfly and a soup of Daphnia at the shallow end.

Neville identified Sea Club-rush *Bolboschoenus maritimus*, and False Fox Sedge *Carex otrubae*, Celery-leaved Buttercup *Ranunculus sceleratus*, Water Crowfoot *Ranunculus aquatilis agg.*, Lesser Spearwort *Ranunculus flammula* and Floating Sweet-grass *Glyceria fluitans.*

Then on to the shore to look for the famous Barns Ness fossils in the limestone rocks, sandstone, slate and coal layers, where so many loose specimens may be picked up. Colonial corals, macaroni and spaghetti varieties, were soon found as well as brachiopods (ancient shells), stigmaria and the mysterious trace fossil, zoophycos, a round shape in the mudstone. A previous group had spent time hammering at the shales; we did not approve. Betty Mitchelhill has a full list of our finds.

Birds and insects were kept down by the strong wind. A steady stream of Sand Martins on migration passed along the shore. Offshore Gannets were seen on fishing trips, some Curlews and Oystercatchers and Redshank had returned from their breeding grounds, and we disturbed a flock of Starlings grubbing amongst the seaweed.

At the car park we had seen Swallows, House Martins, Linnets, Goldfinch and a noisy Wren. Later on a Yellowhammer, a female Stonechat and Willow Warbler were added to the list. There were lots of Cinnabar Moth caterpillars on the Ragwort but few butterflies were seen: Meadow Brown, and maybe a Ringlet, and I found a Six-spot Burnet Moth resting on a head of Glaucous Sedge *Carex flacca.*

Grasses had finished flowering but were rippling beautifully in the wind. Jackie pointed out the uncommon Fern Grass *Catapodium rigidum.* Eyebright *Euphrasia sp.*is a common semi-parasite at Barns Ness and we saw Fairy Flax *Linum catharticum* also, though most of it had finished flowering. Upright Hedge Parsley *Torilis japonica* was flowering well. Late summer flowers, especially the Harebell *Campanula rotundifolia,* made a lovely splash of colour, as well as the pink, and some white Restharrow *Ononis repens*, Knapweed *Centaurea nigra* and Thyme *Thymus polytrichus.*

The star plant however was the so-called Common Cudweed *Filago vulgaris*, on a sandy slope, found by Jackie. Mary Tebble showed us another rare plant, Field Madder *Sherardia arvensis*, one of the Bedstraw family with pretty pale purple flowers. Mary also found a small patch of Purple Milk-vetch *Astragalus danicus*. A plant of Crown Vetch *Securigera varia* grows beside the *Bye-Laws* information stone near the entrance to Barns Ness.

A few intrepid members strode on to Catcraig Limekiln area to look for the Yellow-horned Poppy *Glaucium flavum* Success! One plant.

An enjoyable day's outing. Many thanks to all our specialists: Betty Smith (pond dipper and dragonfly expert par excellence), Betty Mitchelhill (geology), Jackie (botany etc. etc.), Tom Delaney (birds) and all-round-egg-head Neville for sharing their knowledge. My special thanks to Lyn Blades who so kindly chauffeurs me to the meetings.

Mary Robertson

P.S. Sunday 5th August was dismal. It rained all day and never stopped.

CARRIFRAN

Date 11th August
Leader Hugh Chalmers

Just eight Nats turned out for a thorough drenching in the Moffat Hills. Our leader Hugh Chalmers from the Borders Forest Trust had only returned from warmer climes in Naples the night before, and in his rush had forgotten his waterproofs!

The group stopped to admire the Bay-leaved Willow *Salix pentandra* which is doing very well in the valley. A little further on, a nice flush produced some interesting species including Grass of Parnassus *Parnassia palustris*, Burnet Saxifrage *Pimpinella saxifraga*, Flea Sedge *Carex pulicaris*, Quaking Grass *Briza media* and Viviparous Sheep's Fescue *Festuca vivipara*.

The bothy provided superb and welcome shelter for lunch. After lunch we came upon a lovely shingle bit with good examples of alpine plant species carried down to lower levels, including Sea Campion *Silene uniflora*, Common Scurvy Grass *Cochlearia officinalis*, Mountain Sorrel *Oxyria digyna*, Starry Saxifrage *Saxifraga stellaris*, Parsley Fern *Cryptogramma crispa*, Wood Cranesbill *Geranium sylvaticum*. Larva of Fox Moth was found nearby.

A small group walked up as far as the waterfall to see the Roseroot *Sedum roseum*, while the remainder of the party beat a retreat to the cars.

Roger Holme

SEACLIFF

Date 18th August
Leader Jean Gilchrist

This was in effect a repeat of the 2006 excursion when everything, including the weather and the tides, conspired to produce an exceptionally successful day out. (That excursion was written up by Neville Crowther in the 2006 Journal). Matters were somewhat different on this occasion. As we left Edinburgh, it was raining steadily and the forecast promised no let-up. Indeed it was a thoroughly miserable day in the city. But this was a day that demonstrated reasons why one should not be put off by early rain, particularly if the excursion is to the coast around Dunbar and North Berwick. By the time we reached Seacliff, the rain was off and there was very little of the stuff before we left, around 3.30pm. In the circumstances, Jean Gilchrist, the leader, was delighted to welcome 12 members plus some adherents, relatives of members, who came to enjoy the fun of paddling in the pools and prising out their inhabitants.

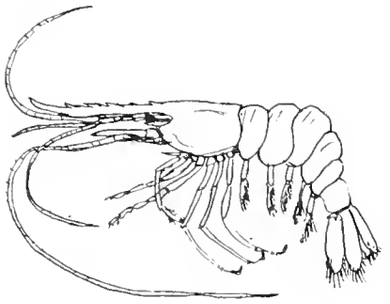
The finds were much as in 2006. Among the fish, Black Gobies, Butter-fish and Pipe-fish; among the crabs, Hermit, Broad-clawed Porcelain Edible and Spider; Seastars (Starfish) and Brittle Stars; Chitons, Bristle Worms and a very fine Sea Slug.

After lunch we walked west along the base of the cliffs to the Gegan, examining the plants among the grass. As we left the rain returned – but we had enjoyed a dry pleasant day out.

Looking through the list of finds, I realised that the names 'prawn' and 'shrimp' have been used very loosely and that although they are closely related, both being crustaceans and decopods, they can be recognised in the field from general appearance and usually also by habitat.

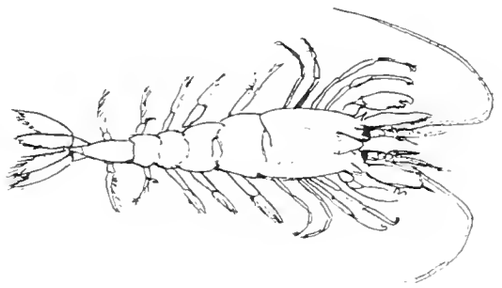
The common prawns are *Leander serratus* and *Leander squilla*; the common shrimp is *Crangon vulgaris*. The fundamental distinguishing features that separate the two groups are the gills. Prawns have branching gills while shrimps have stouter structures called *lamellae*, more similar to gills of fish. The differences however are not immediately obvious to a pond dipper.

Prawns There are many different types, but most are transparent, laterally flattened have very long antennae and a pronounced rostrum, which has a varying number of notches, depending on the species. Their large mobile eyes are mounted on moveable stalks, on either side of the rostrum. They are found in rock pools, usually at all beach levels but tend to withdraw to the deeper warmer areas of the sea in winter. They are general scavengers - both plant and animal.



COMMON PRAWN or *Leander serratus*
found in rock pools, usually at all beach levels
with very long antennae

Shrimps Usually found on sandier shores or sandy pools. They are much tougher in appearance, slightly translucent but have a definite sandy colour that can change to improve their camouflage. They are vertically flattened, presenting a wider body overall with widely spaced legs, much stouter, and stronger. They are also scavengers and are said to be capable of dealing with larger prey such as lugworms. The rostrum is missing and the eyes are not stalked. They burrow in the sand just below the surface. Free movement is usually confined to the night when they sometimes move on to the surface at the edge of the sea.



COMMON SHRIMP or *Crangon vulgari*
found on sandier shores or sandy pools

All the appendages have specific tasks. Those attached to the head are specialised for feeding – the two pairs of antennae locating the food and the others securing it and pushing into the mouth. The first two pairs of walking legs, attached to the thorax, also help with clutching food. The remaining thoracic legs are used for walking and the appendages on the abdomen are for swimming. It is said that in the prawn they tend to link up and work rather like a rowing crew. Sudden backward movement is brought about by the tail and contraction of the abdomen.

Jean Gilchrist

DUNBAR

Date 25th August
Leader David McAdam

The excursion began at the notice board beside the toilets near the swimming pool and throughout the day we looked at many other information boards. Leaflets on Dunbar Harbour were given out and also a question and answer sheet which was very informative and would allow people who go round without a knowledgeable leader to understand better what they were seeing.

Looking down on the bay to the west of the castle we got our first look at the two kinds of rocks we were to see during the day – igneous and sedimentary. In Devonian/Lower Carboniferous times there was a lot of activity in East Lothian which left behind the hard igneous rocks we could see forming the high ground: in the bay Doo Rock and the Castle Rock, and in the distance, North Berwick Law and the Bass Rock, to mention a few. Crossing the bay we saw the other kind of rock – sedimentary, and here it is sandstone. Beside the path a cliff face shows the order of deposition, with possible remains of a fossil soil in which are marks of what might have been roots of plants. Out on the promontory we looked at an eroded gully in the sandstone, showing cross-bedding and other interesting features. We discussed what conditions must have been like when the sand was deposited.

Back at the harbour we went down towards the castle, noting the black volcanic rock on which it was built, contrasting with the red sandstone of the castle itself. It is always interesting to look at buildings, and the Harbour master's building below the castle is particularly interesting. The main part was made of markle basalt, while the areas around the windows and the corners are of sandstone, which is easier to work. Basalt is usually fine- grained but in the markle basalt we noticed large feldspar crystals. The sandstone is not the local red sandstone, but a light colour, and must have come from further away. As well as buildings, walls can be fascinating, and throughout the day we stopped to look at them from time to time. We noticed pieces of local red sandstone, igneous rock and tuff, and on one wall old bricks and red pantiles.

In the afternoon as we walked along the promenade towards Belhaven Bay we looked down on large deposits of tuff and a string of offshore rocks which must have been part of a dyke. Descending to the bay we saw where other dykes had been.

For the first time we saw deposits of another sedimentary rock – limestone. The beds of cementstone (a type of limestone) are a terracotta colour, which is unusual in limestone and must have been caused by the presence of some iron. Amongst the limestone are layers of mudstone and sandstone, showing how sea level has changed over the years.

On some of the sandy patches of the shore we could see ripples in the sand formed by the last tide, and on the rocks nearby, fossil ripple marks formed millions of years ago. On the shore were loose rocks full of fossils, mainly solitary and coloured corals. These rocks have probably come from Barns Ness.

In the glacial raised beach are many shells and we could compare them with shells found today. We did not find any Cowrie shells, though they are sometimes found there.

Although this was mainly a Geology outing there were also interesting plants, amongst which were Common Toadflax, Common Mallow, Hare's-foot Clover, Creeping Cinquefoil and Sea Wormwood with its strong but pleasant smell. On the sea it was good to see Red-breasted Merganser as well as the usual Redshank, Oystercatcher and Gulls.

An interesting outing.

Betty Mitchelhill

ABERLADY

Date 1st September
Leader Lynn Youngs

22 Members met at the Timber Bridge at the Aberlady Bay Nature Reserve on a day that was bright and sunny but with a noticeable breeze.

The focus of the day was birds but in reality the botany proved excellent, and although a few bird species were found the botanical interest won the day in terms of variety and numbers of plants found.

A quick scan at the Timber Bridge included Redshank, Bar-tailed Godwit, Shelduck and a large number of Herring Gulls. We continued along the path towards the Marl Loch halting at a clearing along the way where we identified Tufted Vetch *Vicia cracca*, Upright Hedge Parsley *Torilis japonica,* Goat's-beard *Tragopogon pratensis*, Marjoram *Origanum vulgare*, Meadowsweet *Filipendula ulmaria*, Devil's-bit Scabious *Succisa pratensis*, the remains of Twayblade *Listera ovata,* Marsh Pennywort *Hydrocotyle vulgaris*, Ragged Robin *Lychnis flos-cuculi*, Cowslip *Primula veris,* Restharrow *Ononis repens,* Wild Angelica *Angelica sylvestris* and the first of hundreds of the beautiful Grass of Parnassus *Parnassia palustris,* flowers that we were to see throughout the course of the day. Whilst enjoying this display of flowers, a few of the party caught a glimpse of a male Sparrowhawk swooping overhead being mobbed by a crow before quickly moving out of view.

We had just rejoined the path when a pair of Common Darter Dragonflies were spotted and everyone in the party enjoyed excellent telescope views of this species. Throughout the day we ended up seeing numerous close views of Common Darters.

As we approached the loch further flower species were spotted including Meadow Vetchling *Lathyrus pratensis*, Spring Beauty *Claytonia perfoliata*, Yellow Rattle *Rhinanthus minor*, Common Storksbill *Erodium cicutarium*, Viper's Bugloss *Echium vulgare* and Lady's Bedstraw *Galium verum.* A few in the party reported sightings of both Small Heath and Peacock Butterflies and a party of nine Long-tailed Tits. On the Sea Buckthorn we saw excellent specimens of the fungus *Phellinus hippophaeicola* which is unique to Sea Buckthorn. At the loch we saw Blue-tailed Damselfly and Emerald Damselfly, both giving good views. Bird life on the loch was quiet, with just a few Mallards to be seen.

Beyond the loch everyone was delighted to see Lesser Water Parsnip *Berula erecta* still in flower. Other flower species identified close-by included Common Butterwort *Pinguicula vulgaris*, Marsh Lousewort *Pedicularis palustris*, Great Willowherb *Epilobium hirsutum*, Watermint *Mentha aquatica*, Perennial Sow Thistle *Sonchus arvensis*, Bogbean *Menyanthes trifoliate* and Greater Bladderwort *Utricularia vulgaris* still displaying its rich yellow flower. The bird life included a few Linnets and Goldfinches flying around, and a Snipe put up by our party rapidly flew towards the Bay. Adjacent to the path a splendid, newly hatched female Common Hawker Dragonfly was spotted.

We continued eastwards to have lunch in the dunes, and on the way a variety of flower species were identified including Creeping Cinquefoil *Potentilla reptans*, Greater Bird's-foot Trefoil *Lotus pedunculatus*, Fairy Flax *Linum catharticum*, Field Gentian *Gentianella campestris*, Knotted Pearlwort *Sagina nodosa* and Common Centaury *Centaurium erythraea.* A few Stonechats and one female Reed Bunting were also spotted.

The lunch spot beside the dunes was memorable due to the hundreds of Grass of Parnassus *Parnassia palustris* flowers adjacent to where we were sitting. Other new species included Sea Rocket *Cakile maritima* with a Small Copper Butterfly. After lunch we ventured onto the coast but we beat a hasty retreat with the wind making it very difficult to spot birds.

On our return walk we took a small diversion to see a wonderful display of over 200 spikes of Frog Orchid *Dactylorhiza (Coeloglossum) viridis*, a truly memorable sight with some spikes in excellent condition. A short stroll on a track near the main path brought a few new flower species for the day – Purple Milk-vetch *Astragalus danicus*, Field Mouse-ear *Cerastium arvense* and Hairy Rock-cress *Arabis hirsuta.* A Waxcap spotted in the grass was identified as *Hygrocybe conicoides.*

SEA BUCKTHORN

In summary, this was an excellent day out with some good bird sightings and a variety of botany that exceeded expectations. A few suggestions were given to explain why so many plants were still visibly flowering relatively late in the year – was this due to the warm spring and wet summer or just general global warming? We'll never know for sure but we certainly experienced an extremely interesting and varied range of botanical species for the time of year.

Lynn Youngs

TENTSMUIR

Date 8th September

Leader Mary Clarkson and Jackie Muscott

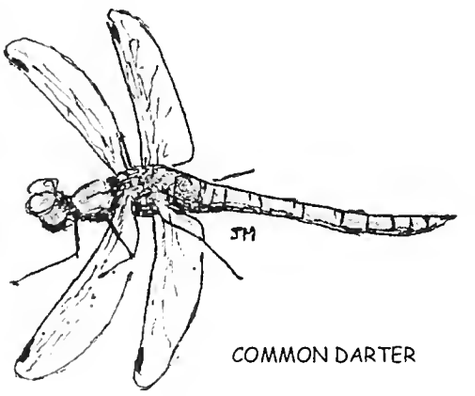
There have been several excursions to Tentsmuir over the years, but for the first time, our approach was from the south. We met at Guardbridge, which had the advantage of allowing us, as a preliminary, to visit an excellent bird hide overlooking the Eden Estuary, from which our party spotted 3 Greenshanks, 4 Black-tailed Godwits and a Kingfisher. From Comerton Farm, the start of our walk, the route lay round the perimeter of Leuchars Airfield and through Reres Wood, a conifer plantation, to reach the shore. Well, that was the intention, but there was so much to see en route that only a handful of us 'made' the beach. As we set off, five Buzzards were calling overhead.

It was a beautiful day and we were able to linger at the edge of a little wood to watch Small Tortoiseshell, Small Copper and Peacock Butterflies. Just before we reached Reres Wood, masses of Haresfoot Clover *Trifolium arvense* fringed the path and here, too, we found the minute Small Cudweed *Filago minima*. In the middle of the path in the conifer wood itself, a sharp-eyed botanist spied the tiny Bird's-foot *Ornithopus perpusillus,* still bearing a few flowers but with the claw-like fruits which give it its name, much more prominent and, in a wet patch, the delicate pink flowers of Bog Pimpernel *Anagallis tenella*.

the tiny Bird"s -foot seen at Tentsmuir and in Bute this year

In the wood, too, we found a number of fungi, Fly Agaric *Amanita muscaria*, The Blusher *Amanita rubescens* and several *Russulas* including *sardonia*, *sanguinea* and *ochroleuca*. A wall by the path was the resting place of numerous Common Darter Dragonflies *Sympetrum striolatum* sunning themselves in the unaccustomed warmth and allowing us to have a really close view. Even more of these Dragonflies were on the wing when we reached the shore. Alas, there was little time to explore this area of dunes, grassland and pools but we did see Terns fishing close to the beach, Grass of Parnassus *Parnassia palustris* in profusion and, in one of the pools, the uncommon Lesser Water-parsnip *Berula erecta*.

Mary Clarkson



COMMON DARTER

MAVISBANK

Date 15th September

Leaders Tom Delaney and Neville Crowther

Having successfully negotiated the steep hairpins of the Dryden Bank descent to the car park at Polton Bridge, we were able to watch Dippers feeding on the North Esk as people assembled. Tom then introduced us to the many designations accorded to this ribbon of land alongside the river. We were to visit the grounds of Mavisbank House, a Palladian mansion built by William Adam for Sir John Clerk in the eighteenth century. Although the ownership of the house is disputed, the design landscape is owned by Historic Scotland. Fire damage to the house over thirty years ago led to abandonment and deterioration, and perhaps too late, there were plans to rebuild. To date, the money required for such a project is but a pipe dream. Along with others, our Society, led by Tom's prompting, have supported moves for a designation locally of nature reserve status, no matter what happens to the 'mansion'.

Our original intention had been to foray for fungi, but after a long period of drought there were none. So we then turned our attention to the former design landscape, which after half a century or more of neglect, has responded to the rigours of nature by becoming a mixture of unusual and nationally-valued habitats, now obscuring much of the manicured formality of 1750.

Still of value, and with something of its original character maintained by the chance attentions of many riding school horses, are the ancient wood pastures. Two historic periods of planting occurred in the mid-eighteenth and mid-nineteenth centuries. A scattering of around 80 ancient trees of many species in a grassland setting are the basis for defining wood pasture. Not all the trees are native. Oak, Beech and Spanish Chestnut, many with girths in excess of 6 metres, predominate. Several exotics such as a single rare Cappadocian Maple *Acer cappadocicum,* a few Monkey Puzzles *Araucaria araucana* and many North American conifers are also present.

The 'canal', the once fashionable name for an ornamental pond, a focus of the view from the mansion, has undergone naturalisation by succession, and is now home to a large array of aquatic plants and animals.

A further rare habitat has been created by the cessation of pumping at the closure of the Bilston Colliery, which lay just to the west. This has, it seems, allowed a former spring line to replenish its activity on the steep ground at the eastern end of the site, producing hectares of Lesser Pond Sedge *Carex acutiformis* community on the steep hillside interspersed with stands of Giant Horsetail Fern *Equisetum telmateia.* After wandering through this area, at its driest for years, we descended to the riverbank. As we returned upstream to Polton Bridge, of ominous interest were several river bank aliens including Himalayan Balsam *Impatiens glandulifera*, Japanese Knotweed *Fallopia japonica* and Pink Purslane *Claytonia sibirica* , dominating much of the ground.

Plus ca change.....

Neville Crowther

DALMENY ESTATE
Fungal Foray for Beginners

Date 22nd September
Leader Eunice Smith

At the South Queensferry entrance to the Dalmeny estate the group were met by a despondent leader. 'We came here two days ago and there were no fungi!' was the greeting. However there were many pairs of eyes so we set forth to search on a beautiful sunny day.

The outing started with discussion and identification of specimens which had been brought from elsewhere. It was a good opportunity to encourage people to look carefully at every aspect of a specimen. The elegant beauty of *Coprinus comatus*, the so-called Lawyer's Wig, with its downward curving shavings of cap tissue led to discussion as to how fungal spores are dispersed in so many different ways. In the case of *Coprinus,* the dripping `ink' aids the spread of the spores.

Another edible species *Pleurotus ostreatus*, known as Oyster Fungus, was shown growing on a dead branch. Some was also found later in the estate. The next one that had been brought was a *Psathyrella.* If there is uncertainty about the first letter of a name it is as well to check, otherwise it is difficult to find the name in a book later. In this case the name sounds as though it begins with 'S', when in fact it begins with 'P'. At this point gratitude must be expressed to the kind member of the group with writing materials, who noted the names for this foray. Our scribe certainly passed with flying colours.

We made our way along the path which led eastward and parallel to the Forth. A note was duly inscribed on the Artist's Fungus *Ganoderma applanatum* to the effect that the Nats had visited that day. Among the other species with pores growing on wood were several Razor Strops, also called the Birch Polypore *Piptoporus betulinus.* Some old samples of *Polyporus squamosus*, the Dryad's Saddle, had tumbled from the trees and thus no longer provided a suitable perch for `Old Nick'. We admired the intriguing multi-coloured zoning of *Trametes versicolor* (sometimes called Turkeytail) and noted the destructive Bracket fungus *Meripilus giganteus* surrounding an old tree stump. Fungi with pores, but of a very different form, were growing on the ground. *Boletus porosporus* lacked obvious red colouration in its cracked cap. Towards the end of the walk we found what appeared to be *Suillus grevillei* growing under Pine. It is usually found under Larch.

Just before lunch our noses had led us to a fungus with a different mode of spore dispersal - *Phallus impudicus*, a Stinkhorn. We were fortunate to find not only a nearly mature specimen but also the early egg stage. We decided that we would take note of the spot and return on our way back in the hope that the slimy mucus around the top of the mature fungus would by then have radiated the evil-smell to attract the flies, and lead to the distribution of spores.

Our lunch was taken in splendid sunshine facing the Forth, where a few days earlier the liner *Queen Elizabeth II* had passed by on one of her last voyages. However even without deck-chairs we were comfortable as we had First Class seating on a long log, which was suitable for a range of leg-lengths. As we sat basking in the sunshine we admired a flitting Dragonfly and cogitated on the various fungal finds. The Rooting Shank *Oudemansiella radicata*, which we found in two different spots, provided an opportunity for the leader to emphasise the need to collect a complete specimen!

During the day several species of Russula were found. Our noses helped us make tentative field identifications of *R. fellea* (smell of pelargonium) and *R. laurocerasi* (smell of bitter almonds). One magnificent white specimen seemed to have forced its way from under a log and was later identified by Elizabeth Farquharson as *R. chloroides.*

There was an abundance of small Puffballs, *Lycoperdon perlatum* on the ground, and *L. pyriforme* on wood growing along the edges of parts of the path. Several other common but colourful fungi were found decorating logs.

Before we returned to the cars we remembered to check whether the Stinkhorn had developed further. Indeed one or two flies were already feasting on it. However, within a few feet of the original specimens we then discovered 15 or so more Stinkhorns, at various stages of development, which had gone unnoticed on the first visit. It was a reminder that a search for fungi must be meticulous and that fortunately the early gloomy predictions had been unfounded.

Although, with a few exceptions, we did not come across a large number of any species there was a satisfactory range of genera. Each specimen was studied with care in order to attempt a field identification. It is hoped that in future each of us, whether 'beginner' or otherwise, might venture a name with a little more confidence. Only time will tell!

Eunice Smith

HANGINGSHAWS

Date 30th September
Leader Mike Richardson

It is always a longer journey than anticipated to reach the Yarrow, but on a morning with clear light from post frontal weather illuminating the pastoral shades of the autumn vegetation it was a delightful drive. 'Mill Glade' at Hangingshaws is owned by Neville Morgan, formerly depute director of the Nature Conservancy in Scotland. He warmly welcomed each arrival and supervised parking, until eighteen of us had assembled.

After a long dry cool spell we had anticipated fewer fungi than on our last visit, but we were pleased to be wrong, as our list grew ever longer. Mike was able to direct us to many species of wood-rotting fungi, often as many as six species on the same stump. Given the recent weather they outnumbered the ectomycorrhizal gill fungi. Each variety of woodland blocks, both broadleaved and coniferous, exhibited their own specialist saprophytes and symbionts. The distinctive 'pixie cap' of the magic mushroom *Psilocybe semilanceolata* was examined with some interest. Mike was also active in collecting mammal droppings in order to culture them for coprophilous fungi.

We expect our final list to be boosted by such specialist interests, which will include the list of Smuts and Rusts collected by Mary & Jackie. One of Mary's fine discoveries was the uncommon *Lentinellus cochleatus,* with its trooping cluster of trumpets on a hardwood stump. Elizabeth Farquharson pursued a singular path, but was sought out to identify many species for others. Such were *Inocybe geophylla,* with its distinctive smell of aniseed, and Honey fungus *Armillaria sp.* in its many confusing stages, from young golden scaly buttons to old collapsing fruiting bodies, dark brown and slimy. Andrew was particularly successful at finding unusual species by foraging away from the crowds: the delicate tracery of *Coprinus lagopus*; a tasty looking apricot fruiting body of Wood Hedgehog *Hydnum repandum*; and a stump sprouting plates of Oak Maze Gill *Daedalia quercina.*

Neville Morgan's interest extended beyond his full participation in our foray, to unexpected hospitality at lunch time, with coffee and tea prepared by Margot, almost to order. I detected a marked reluctance to leave the comfort of Neville's garden and resume the foray. This was partly a consequence of the many varied and interesting plants scattered around, such as the exquisite *Typha minima,* and *Ochna serrulata* with scarlet sepals and green or black shiny fruits. Other distractions included millipedes, pill bugs and slaters. We didn't see any Red Squirrels but there was lots of evidence from stripped cones that they were close by. Jays and Nuthatches, neither of them common back in Edinburgh, were alarm-calling at our presence. After wandering rather unsuccessfully around a patch of old mixed woodland we decided to return to the house. Whilst some were identifying unusual aquatic plants, a splendid example of the large Eyelash fungus *Scutellinia umbrarum* was found by the pond - a suitable last chapter to our visit. We departed happy with the variety our finds.

Neville Crowther

LICHENOLOGY at PRESSMENNAN WOOD

Date 13th October
Leader Chris Ellis

Lichens can be studied throughout the year, and October is a fine time for looking at lichens (except of course for the distraction caused by non-lichenised fungi). With lichens on their mind, the Nats gathered in the car park at Woodend, towards the western end of Pressmennan Wood, and after a brief introductory talk, set off to follow the path leading along the south shore of the lake. The lakeside path winds its way through a variety of woodland habitat types, perhaps typical of the Lothian region. These included dense areas of *Rhododendron*, Ash trees and Hazel of mixed age, some Birch and, towards the eastern end of the lake, an area of old growth Oak trees. This structural variety provided lots of opportunities for discussion about lichens, their form and function, their identification and ecology.

The day was spent learning the names of some of the commoner species, and 'getting an eye in' for the variety of forms which contribute to the rich diversity of this oft-neglected group. These included a revision of the major growth-types, **fruticose** (e.g. *Ramalina farinacea*, *Usnea subfloridana*), **foliose** (e.g. *Hypogymnia physodes*, *Parmelia sulcata*), **crustose** (e.g. *Lecidella elaeochroma*, *Phlyctis argena*) and

leprose (e.g. *Chrysothrix candelaris*, *Lepraria incana*); and examples of reproductive structures used in field identification (apothecia, perithecia, isidia, soredia).

There was ample opportunity to discuss the ecology of lichens and the effects of woodland management; there were examples of lichen chemistry using field tests with K (potassium hydroxide) and C (bleach). A particularly enthusiastic group of individuals examined in more detail the pycnidia of *Lecanactis abietina*, and discussed the complexities of the ascomycete life-cycle. The deep curiosity and quick-fire questions of the Nats are always pleasantly challenging, resulting in a varied and interesting discussion of all things lichenological.

We lunched at a clearing in the wood, amongst partially decayed cut stumps with abundant *Cladonia* species. However, the climax of the walk occurred after lunch when, after some frantic searching, the old woodland indicator species *Thelotrema lepadinum* was found on the lower part of several old Oak trees. All in all the lichens added a rich cameo to a splendid day at Pressmennan Wood.

Chris Ellis

VANE FARM

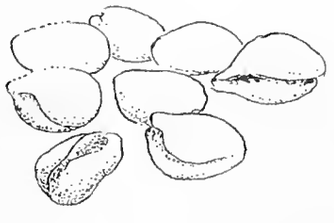
Date 27th October
Leader Joanie Fairlie

The November outing had a last-minute switch to Vane Farm Reserve because our leader thought that there was not enough interest at the scheduled place. Vane Farm was a good choice because we had a lovely visit to the hides.

In the afternoon we walked up to Benarty Hill. Janet went right to the top and reported that we had missed a lovely view of the Forth, Berwick Law and the Bass Rock. We had tea at the cafe while we watched, on the outside camera on the inside screen, a Sparrowhawk demolishing a duck, too far gone for us to identify. We wondered if there was an inside camera relaying the 'gannets' demolishing tea and cakes !

Sandra Stewart

COWRIE SHELLS, in their usual place thrown up by the incoming tide. They feed on SEA SQUIRTS, found on the rocks farther out at sea



YELLOWCRAIG TO NORTH BERWICK
[and back, for some!]

Date 1st December
Leader Mary Tebble

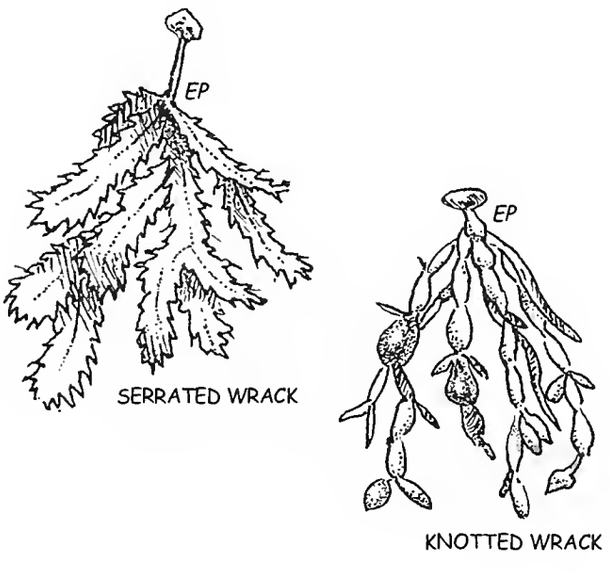
It was cold with a wind which, happily, was from the west. I knew it would push us from behind, along the beach eastwards. Eighteen of us met at the car park and set off through the Sea Buckthorn, which was laden with the orange berries so beloved by members of the Thrush family. The ground beneath was sprinkled with a carpet of wee green Spring Beauty seedlings. Hemlock, Red Campion and a newly established patch of a white garden Comfrey were all flowering. We saw several Blewits along the pathside, as well as in the short turf beyond, which was spiked with the tall dead stems of Viper's Bugloss. Little Puffballs, which Jackie identified as a *Bovista* species, shed puffs of remaining spores when kicked accidentally.

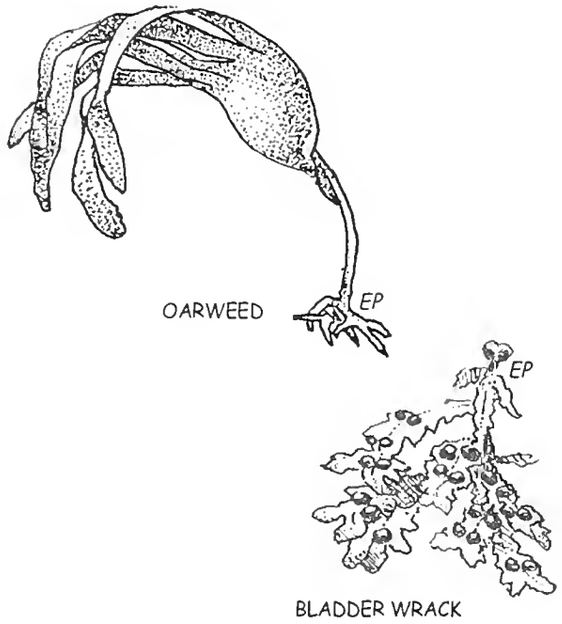
The tide was far out, the beach firm and smooth. Here and there lay a few stranded whole bivalves: Striped Venus, Otter (also known as *gaper*) Shells, double Razor Shells and the little butterfly-shaped Twin shells of Banded Wedge (Donax) shells.

We saw Cormorants, Eider Duck and a Merganser on the sea, and a couple of Redshank at the water's edge. The views were clear and beautiful. We watched the islands of Fidra, the Lamb and Craigleith, and the low-lying Isle of May and the steep-sided Bass Rock, changing positions as we walked. We discussed the history of the volcanoes which had formed this landscape 340 million years ago. I distributed leaflets which illustrate the geology of the area, the islands, birds to be seen, and a few seaweeds.

We studied and identified some of these seaweeds as we reached the little bridge over the burn. We handled Bladder Wrack, Knotted and Serrated Wrack, and Oarweed.

WE STUDIED and IDENTIFIED THESE SEAWEEDS
(Not to Scale)





On the fronds of Serrated Wrack we found the wee white whorls of the calcareous Tube Worm *Spirorbis borealis*. On the fronds of the Oarweed we looked through our lenses at the Seamat, its intricate network being made by colonies of tiny animals (zooids) which secrete protective capsules which join to make the Corraline network. Large Seamats may have as many as a million individuals living in them. When under water these wee animals spread out their tentacles to collect plankton.We crossed the bridge, noticing the pink- (more usually white-) flowered Yarrow and the daisy-like yellow flowers of Smooth Hawksbeard. We made our way down to the beach again, to watch a busy group of wading birds: neat little piebald Ringed Plover and the predominantly white Sanderling whose nimble black legs scurried them quickly along the tide's edge. A much larger Bar-tailed Godwit accompanied them.

Molly thought she spotted a Black-throated Diver on the sea; she probably did, because one had been reported in the area during the week.

The wind grew colder, so we hurried on, stopping only to collect a few Cowrie shells that had been thrown up, in their usual place, by the incoming tide. Cowries feed exclusively on Sea Squirts which are found on the rocks further out at sea. There are two species of Cowrie found here: the larger European, which has two or three black spots on its dorsal ribs, and the Arctic, which is uniform white, and feeds on the Sea Squirts on still farther out rocks. As the empty shells of the European can easily lose their spots, it is hard to separate the two species. Larger shiny Cowrie shells found worldwide were used as money by some communities in earlier times. Did you know that in John O' Groats Cowries are called Groatie Buckies ? Buckie is the Scots word for seashell and the shape of these Cowries resemble the dehusked seeds of Oats.

In front of the Marine Hotel, North Berwick on the seaweed-covered rocks of a little island, we spotted Grey Plover, Turnstones and two Golden Plover. A steady walk at the edge of the golf course, then along the sands, brought us to the Seabird Centre. Jackie reported seeing a plant of Tree Mallow with its dark pink flowers still in bloom (see article on this infamous plant elsewhere in this journal).

Some Nats ate their picnics at the harbour, others on benches on Anchor Green, which is the historic site where witches were burned in the 1600s, where a chapel was built with its ancient graveyard bones still under the ground, and where a ferry to Fife once operated.

Many of us went to the Seabird Centre cafe for a welcome hot drink or soup. The cafe was full of weekend visitors despite the cold wind outside.

One or two of us explored the SSC Discovery Centre and saw the live images of the Grey Seals and their white pups which were being beamed back from cameras placed on the Isle of May and, newly this year, on Craigleith. Two of us went to see the 2007 SSC Wildlife of Britain Photographic competition's short-listed entries and voted for our favourites.

Several hardy Nats walked briskly back to Yellowcraig, battling against the wind but enjoying sunshine. A car-ferry service took others by road back to the car park.

It had been a pleasant, if cold, day for a bracing winter walk.

Mary Tebble

SEA BUCKTHORN
at YELLOWCRAIG

WEST LINTON

Date 28th December

Leader Janet Watson

We were fortunate with the weather, the only heavy rain falling when we were under cover, either in cars on the way to and from West Linton, or seated comfortably in the Gordon Arms. It was not a bad day for a winter walk, a bit windy, but mild with only the occasional short shower.

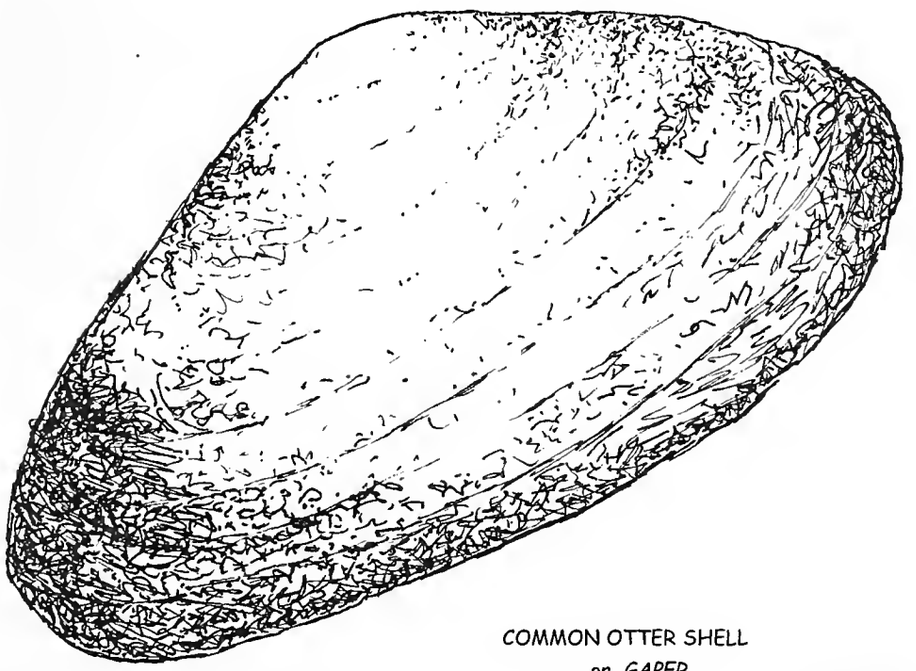
Sixteen Nats set off up the minor road opposite the Inn. Our route followed the course of the Lyne Water in a north-westerly direction, crossing the river a short distance south of Baddinsgill House. Having run the gauntlet of the Pheasant shoot in fields around Stonypath Farm, the only other slight concern was the whereabouts of the bridge. The river was running high and the prospect of a winter swim was not inviting !

Of course, all was well. Janet had, as always, done a proper recce. We found the bridge, crossed over and returned to the village by a road down past the golf club, with the advance party reaching the Gordon Arms just about in time for the 13.30 lunch. There we found the break-off group ensconced in the bar beside the fire. Once everyone arrived, we adjourned to the dining room for huge helpings of food.

A number of birds were seen during the walk, Ravens overhead, Lesser Redpoll in a hardwood copse, and 100+ Fieldfare in a field near the farm. On the way back, a Kestrel was hovering, maybe, like us, hoping for lunch. The select party who chose a shorter route enjoyed watching Long-tailed Tits. In all, it was a most enjoyable day. So thank you Janet for once again organising our Christmas outing.

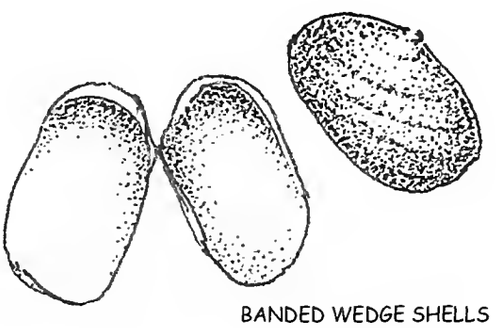
Lyn Blades.

.....SOME OF THE SHELLS WE SAW ON OUR WALK FROM YELLOWCRAIG TO NORTH BERWICK EP



COMMON OTTER SHELL
or *GAPER*

STRIPED VENUS



BANDED WEDGE SHELLS
or *DONAX*

THESE THREE WERE FOUND ON THE FIRM BEACH WHEN THE TIDE WAS OUT. THEY ARE BIVALVES

Isle of Bute

4th -8th June

We had a memorable week in Bute on the Costa Clyde. Cerainly the weather could not have been better in the Mediterranean; we had blue skies, high temperatures and stupendous views of the Argyll and Arran hills all week.

Tuesday - The Botany Day

Tuesday dawned rather cool and overcast as the party congregated at Rhubodach on the North East tip of the island, where we managed to shoe-horn ourselves into the ferry car park, despite the fact that ferry-users had selfishly taken up much of the space. Here we were met by Angus Hannah, the botanical recorder for the Clyde Islands, who had already spent an hour walking from his home in Glen More. We set off on a round trip which took us through a variety of habitats - seaside, bog, old woodland, forestry and a high-level loch, the Bull Loch.

A small grove of trees had been planted near the ferry, including such oddities as the Chinese Bramble *Rubus tricolor,* a spreading plant with brown bristly stems. However a Whitethroat was singing in this odd group of trees, and Mergansers and Sandpipers could be seen on the shore. There were also a few plants of the Sea Radish *-Raphanus raphanistrum ssp maritimus* - a yellow crucifer, virtually unknown on the east coast of Scotland, but something of a pest in the south-west, where it forms dense stands.

Then we were off through a marshy area which revealed some familiar plants: Blinks *Montia fontana*, Cottongrass *Eriophorum angustifolium*, various sedges and some fine stands of Heath Spotted Orchid *Dactylorhiza maculata*; and some less familiar, like Gipsywort *Lycopus europaeus*, which is confined to the Union Canal in the Lothians. More exciting than any of these plants however, was the sight of several Marsh Fritillary Butterflies made soporific by the cool weather, so everyone had a good chance to admire and photograph them. This Butterfly is apparently in decline, though it's still to be found in Argyll and several of the islands, and had only recently been recorded in this part of Bute. (See Roger's photo on photo page 3)

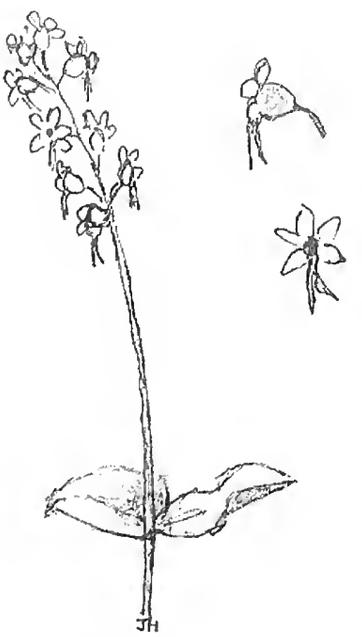
Soon we were into a patch of old native woodland with trees dripping with lichens, and wet rocks dripping with moss-like Filmy Ferns. One of the most conspicuous lichens plastered on the trunks of many trees was *Flavoparmelia (Parmelia) caperata*, a yellow-green leafy lichen forming patches several inches across.

Other lichens were dripping from the branches. As for the Filmy-ferns, both Wilson's *Hymenophyllum wilsonii* and Tunbridge Filmy-fern *H. tunbrigense* were present, so we were able to compare them: in Wilson's the main vein of the tiny frond usually reaches the tip, while in Tunbridge it stops short. Both ferns are pretty well confined to the west coast, but the Tunbridge Filmy Fern also has a site near Tunbridge Wells, where it was first discovered.

A little further uphill we were able to see another west coast fern, the Hay-scented Buckler Fern *Dryopteris aemula*, which is about the same size as the Broad Buckler but has a daintier, somewhat 'frilly' look due to the cupped pinnae.

We had lunch in the ruins of a farm now surrounded by forestry. Just before we got there we encountered a fine, active Wood Ant's nest, and when we sat down to lunch we encountered some fine, active midges - so out came the creams and sprays.

The next leg of the trip took us along forestry tracks and we were soon admiring the tiny Bird's-foot *Ornithopus perpusillus*, a member of the Pea family, which, like the Bird's-foot Trefoil has claw-like seeds. Stag's-horn Clubmoss *Lycopodium clavatum* was growing along the edges of the tracks, and in ditches and flushes beside the track Butterwort *Pinguicula vulgaris* was in flower, and the bright red leaf rosettes of the Round-leaved Sundew *Drosera rotundifolia* contrasted with the green of Sphagnum Mosses.



LESSER TWAYBLADE among the Heather

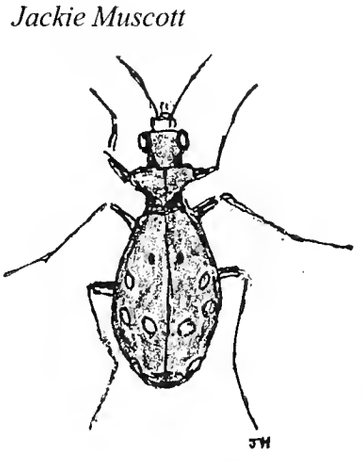
Tiny frogs and toads were hopping about, and in some deep water-filled ruts we came upon a colony of Palmate Newts, recognised by the webbed back feet of the males. Willow Warblers had been singing in the scrub (and Wood Warblers too, I am told), and we had all been delighted to hear a Cuckoo - while during the last lap of our trip to the Bull Loch over heather moorland, we encountered Meadow Pipits and Wheatears.

Cranberry *Vaccinium oxycoccos* was flowering in boggy areas near the loch, where there was a fine stand of the Great Fen Sedge *Cladium mariscus* and a much smaller stand of Slender Sedge *Carex lasiocarpa*. The Great Fen Sedge has a saw-edge to its leaves, which can cut. It is used in thatching since it is very flexible and can be bent over the roof tree, straw and reed being too brittle for this purpose. It is perhaps no surprise that it grows well in the fens of East Anglia, but it is also found in more acid conditions in the west of Scotland. Slender Sedge, which has extremely fine leaves, is widely scattered in Scotland, but is rare south of the Border.

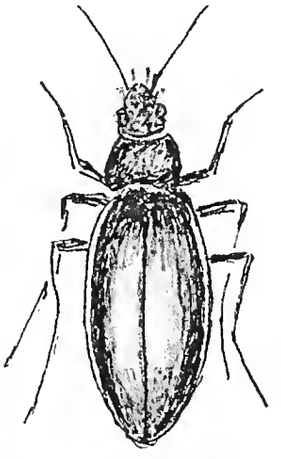
We returned to the road by forestry tracks, but there was yet more to see: small patches of Lesser Twayblade among heather beside the tracks; more baby frogs and toads; tadpoles in a ditch; and a number of insects. Green Tiger Beetles were scurrying about, along with the odd Violet Ground Beetle, and as the day warmed up and the sun came out, Green-veined White Butterflies started flitting about and we had a splendid view of a Gold-ringed Dragonfly *Cordulegaster boltonii* resting in a ditch.

It was a wonderful start to the holiday, thanks to Angus, and by the time we got back to the cars a dull day had transformed itself into a beautiful sunny evening, a portent for the rest of our stay.

Jackie Muscott



GREEN TIGER BEETLE



VIOLET GROUND BEETLE

Along the forest track ..... the tiny BIRD'S-FOOT
Ornithopus perpusillus

Wednesday was Geology Day - Kilchattan Bay to Hawk's Neb

About 21 of us gathered at the south end of Kilchattan Bay at the bus terminus. There we met Julian Hill, a local geologist who has produced the excellent Geological Field Guide to Bute. Julian is a very able leader and of course very conversant with the local geology. He gave an excellent introduction to the basis and background to the geology of the area. His talk was particularly enjoyable due to the warm sunny weather, which made standing around a pleasure.

He covered plate tectonics and gave the interesting statistic that New York was going away from us at the rate our finger nails grow ! At one time our land mass was on the Equator, with a climate similar to that of Namibia now. He then took us through the various geological processes which formed Bute.

The geology of Bute is very varied, partly due to the Highland Boundary Fault which runs through the island and forms the boundary between the Highlands and the Lowlands of Scotland. The north of the island is built from Dalradian Highland schists which were formed about 600 million years ago, initially from sea muds and sands, which were subsequently converted into schists by pressure and heat. They then drifted from Antarctica to their present location. The erosion of these rocks led to the formation of the Old Red Sandstone (O.R.S.) about 400 million years ago, which filled the hollows in the subsiding Midland Valley. Good outcrops occur in the Kilchattan Bay area.

About 340 million years ago Scotland entered the Carboniferous era, when various rocks were laid down in the Scottish Midland Valley. These were limestones, coals, shales and sandstones. Volcanic activity resulted in lava flows, volcanic vents, pipes and dykes.

The next age was the Palaeogene (Tertiary), when the volcanoes on Mull and Arran were active. The Arran centre caused molten rock to form sills, one of which forms the cap to St Blane's Hill. Many vertical sheets of rock (dykes) came into Bute from the Mull centre. Good examples can be seen at Kerrycroy and Ettrick Bay.

The final stage in the saga was the advent, about two million years ago, of the Ice Age which resulted in changing sea levels and raised beaches. The last ice crossed Bute about 20,000 years ago, melting 6000 years later.

The party then set off south along the West Island Way towards Hawk's Neb. At the first stop, Julian showed us sandstone which had been baked by the intrusion of a basic volcanic dyke. The sandstone in the columns had been heated, which had converted it to a very pale colour, the brown iron oxide of the Old Red Sandstone being lost in metamorphism. The actual dyke had been removed by marine erosion.

Our next stop was at a volcanic pipe, which had been drilled through the Old Red Sandstone. The tuff, or volcanic ash, had contaminated the surrounding sandstone, resulting in fine veins of gypsum intruding into the sandstone. The tuff may relate to the same magma intrusion that caused the columnar sandstone.

The next bay showed good examples of glacial erratics, which were mostly schist boulders lying on the O.R.S. Further south we looked at cross-bedding in the O.R.S. We then passed through a gate and viewed the impressive headland of Creag a'Mhara. Above the sandstone, on the beach, were the cliffs formed from lava flows.

The next point of interest was the Creag a'Mhara fault marked by a line of trees. The fault indicates an abrupt change of rock types, from grey lava flows to brown sandstone.

The headland is formed of a massive volcanic vent breccia (agglomerate). We examined the blocks of lava embedded in the matrix of ash, together with broken fragments of cornstone and sandstone.

Hawk's Neb was our next port of call. Prior to lunch we looked at the impressive Neb, which is a cliff of brown sandstone tilting inland into thick cornstone, which is regarded as the Carboniferous layer. Tertiary dykes intrude both the lavas and the nearby vent and cross the raised beach into the sea through the weathered cornstone.

An obvious brown weathered and columnar jointed igneous rock (Tertiary dolerite) is here intruded parallel with these lower carboniferous sedimentary rocks. About 30 metres further south there is the 'Bute' outcrop which is an 'ultra-basic intrusion'. Broken samples of this rock were handled and found to be surprisingly heavy – this was possibly dunite . Serpentinite, augite, and peridotite were also brought up from depth in the crust – possibly from the mantle.

This was the end of the geological excursion and while we lunched, Julian was pleased to answer any questions. A family of Wheatears were flying about and there were Eiders and Cormorants on the sea.

After lunch some of the party returned to the cars with Julian, while others continued on the West Island Way, where a small group stopped at a small pond to pond-dip for dragonfly larvae etc.

Ian McCallum

IN THE AFTERNOON .....

Leaving Ian and company to their pond-dipping at Glencallum seven of us set off to return to Kilchattan Bay by a circular route. With the help of Buteshire NHS's splendid booklet for Island Trail 5, we followed the path by Loch-na-Leigh, St. Blane's Chapel and Suidhe Hill, a walk of at least 2¼ hours, according to the directions. We needed to be back in time for dinner and a wash and brush-up before the evening reception , so there was little time to explore the sites en route. We had beautiful views of the Clyde Coast and Arran, perhaps not as spectacular as in March, when the hills were snow-capped. Loch-na-Leigh has a rich variety of wildlife, but we could not linger. Neville visited it the next day and found all the Odonata he expected. We made a short stop at St. Blane's, originally the home of Celtic monks and a place of worship from the 6th to the early 18th century, in a beautiful setting among trees and cliffs with an outlook to the sea. The last part of the route was more uphill than down , and on this hot sunny day we were somewhat warm and weary by the time we reached Kilchattan Bay. A lovely walk with lots of variety.

Lyn Blades

AND IN THE EVENING.....

The Buteshire Natural History Society (BNHS) kindly held a reception for our party from Edinburgh on the Wednesday evening. We were royally entertained with drinks and cocktail nibbles at this sociable gathering with the local naturalists. It was held in the Bute Museum which houses a natural history section run by the BNHS on a purely voluntary basis; and a section recording the archaeology and history of the island. After an enjoyable evening amongst the exhibits our only regret was that time was too short, and we left with the promise of a return visit.

Margaret Perry

....and Thursday was Bird Day

Thursday was spent with Professor Michael Taylor, who retired to the island, and has been a passionate bird watcher for over 60 years. We met him at the Museum in order to rationalise our transport and then drove out to Ettrick Bay on the west coast. The coastal road where we first stopped, is a causeway of sorts with the low tide sand and mud flats to our east, and ponds and damp meadows inland. On the sands a breeding Ringed Plover was performing distraction displays, and a Shelduck with juveniles was seen on the rocks beyond. Behind us Teal, Mallard and Moorhen provided us with indications of breeding in the reed fringed lagoons.

A few miles further to the south we parked at Straad Bay, overlooking the now uninhabited Kilmarnock Island. More Shelduck were seen dabbling amongst the millions of lug-worm casts. Whitethroats, Sedge Warblers and Stonechats entertained us in the Gorse scrub and tested our ability to count accurately how many were actually present.

Stopping at Loch Ascog and trying unsuccessfully to repeat our sighting of an Osprey on the arrival day, we crossed the island once more, to visit the wildlife photographer Phillip Kirkham. If the garden feeders with their many attendant birds, or the tea and coffee accompanying his wife's lemon sponge cake didn't keep interest high, then the series of stunning photographs and a tour and display of his reprographic system did. A multitude of cameras, lenses and tripods catered for every conceivable photo opportunity and the complex of electronic replication systems were able to reproduce images on table mats, wall plaques, calendars & coasters as well as mere paper.

Leaving a sheaf of orders and saying goodbye to Michael who had to return to the museum, we departed variously for parts south, some to visit the gardens of Mount Stuart others to the beaches in the south west towards Garroch head.

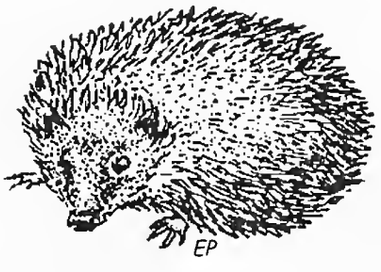
Neville Crowther

After our birdie morning we were invited to visit a photographer-naturalist and I thought 'Oh well, we'll go and have a look, but I'm not sure that I will want to buy any photographs ! What a lovely surprise. Phillip Kirkham is no ordinary photographer. I have enjoyed my chopping board with its cluster of Eider Ducks every day since !

In the afternoon four of us had a lovely walk in the grounds of Mount Stuart. There was lots to see and it was a beautiful afternoon as we walked through the woodlands along the shore. We were chatting away, only half aware of our surroundings when we heard a 'plop'. We rushed to the bridge over a burn, just in time to see an Otter swimming along the burn. It disappeared, but we relished our fleeting glimpse.

On our return through the formal gardens we met Mrs Tiggywinkle snuffling her way across the lawn. She was a bit surprised to see us, so stopped short for a good look at the invaders. She didn't like what she saw, so disappeared into the bushes before we got our cameras ready. But here she is .....

Sandra Stewart



Friday - going home day

Some of us visited the fascinating Victorian fernery and interesting garden at Ascog,. Then it was to Scalpsie Bay for lunch in the sunshine and a walk along the shore, where we found Yellow Horned Poppy *Glaucium flavum* in flower.

Another hot afternoon - tea seemed a good idea. We called at Mount Stuart to be greeted with "Youse is looking hot', before being served with a large pot of tea and delicious meringues. Then it was straight to the ferry and home.
Lyn Blades

.....

MOUNT STUART

Crossing to Bute about midday, Betty Mitchelhill and I decided to visit Mount Stuart House in the afternoon.

Mount Stuart is the seat of the Stuarts of Bute, direct descendents of King Robert the Bruce. The family has been on the Isle of Bute for more than 700 years. . After a fire in the previous house in 1877, the 3rd Marquis and his architect, Sir Robert Rowand Anderson, started to create this Fantasy. This word is used in the leaflet, and that is what it is. Still unfinished on his death in 1900, his widow carried on the work; and it still carries on.

From the Visitor Centre we were taken to the House by shuttle bus. The tour guide gave our group a short talk, and the tour was to take one hour.

We started on the Marble staircase and here the word 'House' took on a different meaning ! Great pillars of marble, curved ceiling beams and strong colour. There is a tapestry approximately 18 feet long, *Lord of the Hunt* , on one side of the balcony. A succession of large rooms followed; we viewed from wide doorways: the Horoscope Room, Dining Room (table laid), Drawing Room (portrait paintings on the walls), a bedroom with en suite facilities. At this point we were at the Family Bedroom: high double bed, overhead canopy, and baby cot alongside. Here the guide dipped down at the side of the bed and said ' we all know the phrase *Sleep tight*' , adding that in those days, beds did not have springs, only ropes stretched across a

The final view was of the Chapel, very light, looking through a high arch towards the Altar, which was under three tall stained-glass windows. Apart from Altar rails, we had a clear view of the the floor, which is deliberately tiled; a picture in itself, in delicate colours.

The guide finished here. We got the shuttle bus back to the Visitors Centre. Here we viewed a video about the House and the young family, who no longer live in Mount Stuart, but somewhere else on the island.

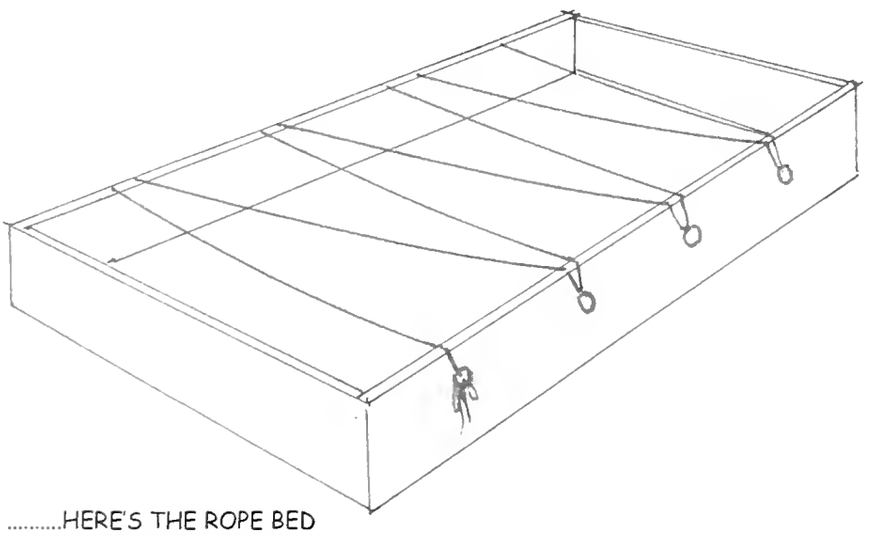
Mount Stuart is available for functions. Indeed Heather McCartney's wedding took place there. The House is huge, with many bedrooms on 4 or 5 floors.

NIGHT, NIGHT, SLEEP TIGHT.....

I followed up the 'Sleep tight'. At the National Museum of Scotland, each person I spoke to smiled and added 'don't let the bugs bite'. Before modern mattresses, ropes were strung across the bed frame. These ropes had to be tightened up from time to time. I have a card with a lattice design. At the Central Library, smiles again, but no explanation for the 'bed bugs' part! That seems to be a late addition to the 'sleep tight' part. The Librarian gave me seven pages from the Internet ! One of these entries suggest that 'sleep tight' simply meant 'sleep soundly'

Dorothy Stuart

NIGHT, NIGHT
SLEEP TIGHT
DON'T LET THE BUGS BITE



.....HERE'S THE ROPE BED

AND HERE'S the BED BUG
NOT TO SCALE !

OBSERVATIONS 2007

JANUARY

4th	North to Callander to find Barrow's Goldeneye, visiting from Iceland.	MW
5th	In the scrub area on the right bank of the Tweed at Peebles, firstly four Bullfinch, then nine Long-tailed Tits and two Nuthatch.	MW
5th	4 Brent Geese, Tyninghame.	BC
7th	Beautiful male Goosander diving in the drumlie Water of Leith at Canonmills.	LB
10th	Water Pipit, Musselburgh.	BC
10th	Caspian Gull at Dunbar seen by SSC volunteers.	MT
24th	Dipper displaying to his mate by vibrating his wings, Water of Leith in Dean village.	MW
28th	2 Fulmars sitting on ledge on cliffs, Fidra.	MT
	Gannets returned and seen flying around the Bass.	MT

FEBRUARY

1st	Killer Whale at North Queensferry.	BC
3rd	A Peacock Butterfly, drab but not tattered, in the sun on a wall by the Union Canal.	MW
6th	150 Whooper Swans on the Tyne Estuary.	LB,SS
7th	Barrow's Goldeneye still at Callander.	BC
8th	A female Hen Harrier flying slowly, close to a Pentlands reservoir.	MW
8th	Little Grebe feeding in the partially frozen canal near Viewforth.	JM
12th	2 Mediterranean Gulls at Port Seton.	BC
15th	Scaup - Holyrood Park.	NT
19th	Black-necked Grebe, Fernieness, Longniddry.	BC
20th	Hawfinch, Scone Palace.	BC
22nd	Kingfisher perched by the River Esk, Musselburgh.	MW

LITTLE GREBE at VIEWFORTH

MARCH

4th	Stuart Maxwell drew my attention to Purple Toothwort *Lathraea clandestina* by the River North Esk at Mavisbank.	JM (with Fungus Group)
5th	Little Egret at Vane Farm.	BC
7th	Kingfisher in flight, River Tweed near Melrose.	MW
7th	Purple Toothwort *Lathraea clandestina* by the River Tyne, east of East Linton; a large herd of Whooper Swans grazing near E Linton, and a Rookery near Tynemouth which turned out to be a Heronry as well.	MC, JM
7th	Noisy building work in full swing in rookery at Walltower, Milkhall : over 75 pairs of rooks are very vocal !	NC
7th	Beautiful Peacock Butterfly in the Rock Garden, Botanic Garden.	LB,SS
8th	Male and Female Smew, Vane Farm.	BC
8th	Purple Toothwort in flower below a Willow, River Esk at Musselburgh; and again by the River Tyne, East Linton.	MW
23rd	Whilst digging ponds in the old reservoir bed at Brock Wood located a Water Shrew, the reserve's first record. Two specimens of the winter moth, the Satellite, seen - very local.	NC
23rd	Large Badger tenement on a steep slope, with latrines at the foot, in wood near Humbie.	MC,JM
26th	Tawny Owl, calling - Holyrood Park.	NT
28th	Wheatear, Lead Law, West Linton, and frog spawn, Straiton Pond.	MW
31st	Lesser Scaup, St. Margaret's Loch.	BC

APRIL

	Lesser Scaup (American vagrant) at St Margaret's Loch, Holyrood Park, for most of month.	NT
1st	Large amounts of Scarlet Elf Cup *Sarcoscypha coccinea* at Duns Castle. Also Bay Willow *Salix pentandra* covered with Sawfly galls *Euura amerinae*.	JM (with fungusGrp)
1st	Black Redstart, Torness.	BC
2nd	A Roe deer on Gullane Hill, during a golf competition!	MW
2nd	Great Spotted Woodpecker, drumming - Holyrood Park, near Palace.	NT
4th	Lots of Pine Ladybirds on Rhododendrons at RBGE. A new record in 2006.	LB,SS
5th	A Comma and a few Peacock Butterflies in Blackford Glen plus a pair of Green Woodpeckers anting. A Comma was seen again by JM on 27/7/07.	MC, JM
5th	2 Comma Butterflies, near Lasswade.	NT
9th	First Common Sandpiper and Swallow at Carlingwark Loch, Castle Douglas.	MW
10th	Ravens feeding young, in Threave Castle. Short-eared Owl at the north end of the Innerleithen to Middleton Moor road.	MW
12th	For over an hour I watched the wheeling aerobatics of about 970 Golden Plover over Cockmuir, Midlothian. Several flocks rose, then coalesced before breaking up and diving low over the fields. This was repeated again and again before the display was concluded and they headed away northwards.	NC
13th	A Kingfisher on the River Almond near Craigiehall.	JM
13th	Little Ringed Plover, Musselburgh.	BC
17th	Osprey, flying over being mobbed by Crows - Holyrood Park.	NT
19th	2 Avocets at Musselburgh.	BC
19th	Manna Ash *Fraxinus ornus* in flower in George Square Gardens.	JM
20th	40 occupied Grey Heron nests - Duddingston Loch.	NT
22nd	A rare fungus *Arrhenia lobata* discovered by Jane Squirrell on wet moss at Easter Inch.	JM, JS
23rd	100+ Golden Plover in beautiful breeding plumage by Fala Flow.	MW
27th	Three cocks displaying at Black Grouse lek in the Moorfoots; one of the very few now remaining locally.	NC
28th	Bee Flies *Bombylius major* or relatives on dry banks below New Lanark car park.	MC, JeM, JM
29th	Otter spraints at nine different sites along the Baddinsgill burn; three Dipper territories with nestlings being fed at one nest.	NC

MAY

2nd	Three Grey Herons tottering atop Spruces at a Heronry near Clovenfords.	NC
4th	We saw a number of Green Hairstreaks on the Blaeberry beside the track east of Castlelaw (NT229642).	LB,EG,MP,SS
9th	Cuckoo calling above Bavelaw.	MW
10th	12 Dotterel on Broad Law.	BC
13th	WEBS count at Gladhouse reservoir included five broods of downy Greylag goslings and a Great Crested Grebe nest with at least one brooded egg.	NC
	At dawn, six species of wader displaying in the valley at Black Hope Byres - Snipe, Redshank, Peewit, Curlew, Oystercatcher and Common Sandpiper : a delight for the senses.	NC
23rd	Spoonbill, Timber Bridge, Aberlady.	MW
24th	Spoonbill at Aberlady.	BC
27th	Spotted Flycatcher, Culzean.	MW
29th	Temminck's Stint at Tyninghame.	BC
30th	Angular Solomon's Seal *Polygonatum odoratum* rediscovered in Pepper Wood.	JM
31st	Ring Ouzel and Whinchat at Green Cleuch.	MW

JUNE

6th	Painted Lady Butterfly - Holyrood Park.	NT
7th	Otter in the grounds of Mount Stuart, Isle of Bute.	MW
8th	Yellow Horned Poppy on the shingle at Scalpsie Bay, Bute.	LB,EG,SS,MW
18th	Red-backed Shrike, Barns Ness.	BC
27th	All the usual culprits plus two families of Great Spotted Woodpeckers and our first Nuthatch, necessitate filling the garden feeders almost every day.	NC
30th	*Bombus terrestris* mating on the brick wall of my house in Kirkliston. Queen has intentionally dislocated her sting to make things more comfortable for the male. See Photo.	RH

JULY

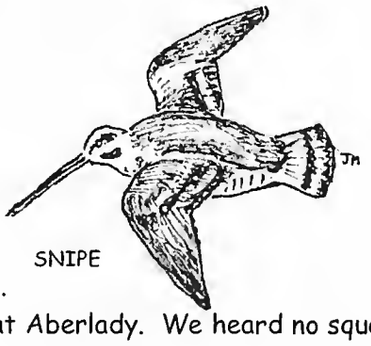
1st	Small Tortoiseshell and Peacock caterpillars on nettles; Ringlets and Red Admirals on the wing in Dalkeith Park.	JM (and Fungus Group)
9th	2 flower spikes of Lesser Butterfly Orchid *Platanthera bifolia* and an evening hatch of small white Mayflies, (like that at Harlaw on 7/6/06) by Loch Hakel near Tongue.	MC, JeM, JM
10th	The first basking Adders of the year at Woodhall Dean despite the sky being overcast. Three large females, all swollen , and, I suspect, ready to give birth.	NC
12th	Pectoral Sandpiper at Musselburgh.	BC
20th	A picnic stop by the River Feshie, on the way back from the NW, was notable for exciting butterflies : Small Pearl Bordered and Dark Green Fritillaries many in cop, Small Heaths, Common Blues, Ringlets and the elusive Scotch Argus. Sadly we were too late for the rare Small Blue which we now know has a breeding site on the river shingles.	NC
24th	Great Crested Grebes, pair with 3 chicks - Duddingston Loch. Weasel, appeared approx. 2 feet from where I was sitting in long grass - not sure who got more of a surprise! - Arthur's Seat.	NT

AUGUST

1st	Green Sandpiper at Musselburgh.	BC
2nd	Hares on the hill, N of Broxburn.	JM
18th	Weasels, 2 chasing each other through the long grass and over my boots! - Holyrood Park.	NT
20th	Kingfisher - Duddingston Loch.	NT
22nd	Wasps' nest in the mouth of (old?) rabbit burrow near Abercorn.	JM
23rd	Kingfisher on an unnamed burn S of Westfield. Young Buzzard screaming for food.	JM

SEPTEMBER

8th	A Comma Butterfly on Scabious in a garden in East Linton allowed itself to be examined from all angles at a range of 40mm.	F&MD
11th	Curlew Sandpiper at Musselburgh.	BC
25th	Cramp Balls *Daldinia concentrica* on a dead Birch, Livingston.	MC, JM
29th	At Suntrap, Gogar, west of Edinburgh, I saw a white Fox hunting in the adjacent rough field.	SR
30th	Large amount of Yellow Loosestrife *Lysimachia vulgaris* by a marshy stream nr Uphall Station.	JM



SNIPE

OCTOBER

2nd	Chiffchaff, singing - Duddingston Loch.	NT
2nd	Flock of 28 Magpies - Holyrood Park.	NT
2nd	Great Northern Diver at Musselburgh.	BC
2nd and 23rd	Numbers of Snipe disturbed in marshy fields near Ochiltree.	JM
5th	Weasel chasing baby Rabbit, while we lunched on the shore at Aberlady. We heard no squeals, so we presume the Rabbit escaped.	LB,JG,SS
9th	Firecrest at Torness.	BC
12th	About 10 fruiting bodies of Earth Star *Geastrum triplex* , growing below Birch next to the cycle path near Warriston Road, Edinburgh.	JS,G F

13th	I was out with other volunteers cutting down Tree Mallow on Craigleith when I found a group of three Earthstars growing in the Tree Mallow leaf litter. David Mills took a photo which eventually reached Roy Watling who identified it as a Beaked Earthstar *Geastrum pectinatum.*	BB
15th	Snow Goose at Aberlady.	BC
22nd	American Golden Plover at Aberlady.	BC
30th	Family of Long-tailed Tits flying across small front gardens on Marchmont Crescent.	JM

NOVEMBER

2nd	At Lochan an Daim below Schiehallion we found a pair of Whoopers and four of this year's cygnets. In 1978 I had found a very rare breeding pair at this same site. I wonder if they were related?	NC
7th	Pennyroyal *Mentha pulegium* discovered (still in flower) and Prickly Sedge *Carex muricata* rediscovered near South Queensferry.	JM
8th	6 Little Auks at Dunbar.	BC
17th	The annual Grey Seal pup count of the Forth Islands saw us on Inchkeith recording over 120 pups. Here mortality was low, unlike the Farnes where storms had killed most pups on certain islands. A bonus this day was two Peregrines and two Merlins.	NC
17th	A large patch of Crown Vetch *Securigera varia* in full flower on Longniddry railway walk.	LB,MP
20th	58 Siskins in the garden feeding on the rain-saturated lawn.	NC
24th	Pallas Warbler at St.Abb's.	BC

DECEMBER

3rd	Shorelark, Torness.	BC
26th	Half a dozen or so Waxwings polishing off the remains of Rowan berries just outside my flat in Warrender Park Road. They were only there for a minute, Blackbirds having consumed most of the berries.	JM

In late November at home in Kirkliston, west of Edinburgh, south of the Forth Road Bridge, I twice saw a white Squirrel in my garden, mostly just sitting on a tree. It appeared to be a fully grown albino male. I subsequently saw it briefly in a nearby garden, which also has bird feeders. A neighbour indicated a wider area where it had been seen. I saw one unsuccessful attempt at accessing food in my hanging bird feeders, so I have made sure that there are peanuts on the ground feeder. SR

CONTRIBUTORS

BB	Bill Bruce	LB	Lyn Blades	MC	Mary Clarkson
BC	Bill Clunie	NC	Neville Crowther	F&MD	Frances and Munro Dunn
GF	Graham French	EG	Ena Gillespie	JG	Jean Gilchrist
RH	Roger Holme	JeM	Jean Murray	JM	Jackie Muscott
MP	Margaret Perry	SR	Susan Robertson	JS	Jane Squirrell
SS	Sandra Stewart	NT	Natalie Taylor	MT	Mary Tebble
MW	Molly Woolgar				

BUCKING the TREND of GLOBAL WARMING ??

Eileen's Snowdrop, Mrs McNamara at Kilcreggan, Peebles came into bloom:

2005 ..... December 8th
2006 ..... December 20th
2007 ..... December 28th

It has obviously not heard of global warming yet !
Eileen Perry

WINTER TALKS 2007

24th January — NATIVE TREES: THEIR PAST, PRESENT AND FUTURE — *Richard Ennos*

Native trees in Scotland have been derived from refugial populations that survived the last glaciation elsewhere in Europe. Genetic markers scored in current day populations indicate that forest species were derived from a variety of refugia - Oak and Ash from Iberia, Holly from Iberia and the Balkans, and Scots Pine from northern Europe and possibly south-western Ireland. Since their arrival in Scotland, some taxa such as Aspen have largely lost their potential for sexual reproduction and adaptation. They survive as extensive clones through asexual suckering. In contrast species such as Pine and Birch have adapted to the regional and local environments within Scotland. Finally in genera such as Sorbus, multiple hybridisation events have generated novel endemic taxa within Scotland, notably on Arran. The future survival of our native tree species in the face of climate change is dependent on their ability to adapt. This is potentially hindered by the fragmented nature of many native populations. Studies of pollen and seed flow among remnant populations of Ash in the Scottish Borders demonstrate that even though they are small and spatially isolated, genes are readily exchanged among them and they retain their potential for future adaptation. RE

21st February — CHANGES TO SCOTLAND'S BIRD LIFE: a new avifauna — *Ray Murray*

The Scottish Ornithologists' Club is producing a new *Birds of Scotland*, due for publication in autumn 2007. This has been prompted by the recent huge expansion of information available to us in recent decades that, in effect, demanded a review of the current understanding of the status of different species. Part of this has been the increase in the numbers of species recorded in Scotland, rising from the 453 commented upon in 1986, when the avifauna was last reviewed, to the 509 recorded up to 2004. Not only has the species list increased but so have the numbers of birds recorded breeding in Scotland, with another 10 new species and over half of all species showing some change in status. Such has been the increase in data that our understanding of breeding species has been transformed. As an example, the numbers of Water Rail currently known to occur in Scotland, at about 1,200-1,400 territories, now exceeds the British Trust for Ornithology estimate for the whole of the British Isles in 2000 of 900-1,200 territories. Similarly the recent spread of Nuthatch within Scotland since 1989 has been documented in some detail. These are just two of a huge numbers of changes to understanding that *Birds of Scotland* highlights. A pre-publication offer of £60 is available for ENHS members (reduced to £45 for SOC members) . RM

21st March — WILDLIFE CRIME — *Jim McGovern*

A wildlife crime team has recently been established within the Lothian and Borders Police Force. In describing his experiences as the team leader, Jim regaled us with stories ranging from the humorous to the unpleasant, demonstrating the concern the authorities now have for protecting the countryside and its wildlife, and raising public awareness of associated criminal activities.

Much amusement was caused by the tale of the unhappy owner of a pet alligator which had outgrown its accommodation - in the bath - of an upper flat - of a high rise apartment block.

There was also the avid egg collector who flatly denied his presence at a site where a rare bird's eggs had been stolen. When the officers visited his house he had a photograph on display of a one-off event in the area (which amazingly included one of the investigating officers in kilt and fancy uniform) at the appropriate time, which effectively blew his alibi and caused much hilarity among the investigators. Other crimes mentioned were: the theft of wild bluebell bulb *Hyacinthoides non-scripta* sold to garden centres; poisoning of birds of prey; and badger baiting.

In conclusion, the audience were strongly urged to report any suspicious incidents, no matter how small, during their excursions in the countryside. We thank Jim for presenting us with a revealing account of the team's work.

Margaret Perry

25th April — MEMBERS' NIGHT

26th September WILD GOOSE CHASE - CAERLAVEROCK TO THE ARCTIC *Brian Morrell*

Brian Morrell of the Wildfowl and Wetlands Trust commenced the 2007/08 indoor programme with a talk about the Barnacle Geese of Caerlaverock. This population of Barnacle Geese breed and nest in the summer months on Svalbard in Norway and embark upon a 2000-mile migration every year to winter on the Solway Firth. Brian described the pilot project of an incredible new tracking system which follows a bird's migration via solar-rechargeable GPS satellite transmitters. A grant provided the research team with four transmitters and a promotional campaign tied in with local schoolchildren to name the four geese selected; these were Sir Peter, Myrfyn, King Harald and Magnar. Brian described the subsequent journeys and fates of the four geese over 2005-06, with only Sir Peter mating successfully that season and only Sir Peter and Magnar returning alive to Scotland in autumn 2006. However the satellite tracking system worked so well and provided such excellent data that a further grant continued the project with another nine transmitters. The WWT website provides regular updates on the movements and activities of the Barnacle Geese and allows one to follow their journey via a satellite tracking map, at **www.wwt.org.uk** BM

24th October THE WATER OF LEITH: ITS WILDLIFE AND THE WORK OF THE TRUST *Helen Brown*

Helen Brown of the Water of Leith Conservation Trust treated ENHS members to an armchair tour of the Water of Leith. This included a brief summary of its socio-industrial history, descriptions of its wildlife, and updates about the work of the Trust. We learned that the Water of Leith at one time served up to 70 mill site s within ten miles of river, until 1973 when the last mill, at Belford, finally closed. We learned that there are 72 species of aquatic plant identified along the river and 13 species of fish, including perch and pike which had escaped from Union Canal via a 36-foot drop from the overflow pipes. Helen also told us about the riverside's three successful nesting pairs of Kingfishers, three active badger setts, the resident family of roe deer near Colinton Dell, and the young otter that has recently been spotted and which may be settling into the area as its own new territory. Finally Helen described the work of the Water of Leith Trust which was originally formed by local residents in 1988 and which has grown into a thriving organisation thanks to a £5 million Millenium Grant. The funding allowed it to expand with an interactive visitors centre situated in Slateford, an education programme that reaches around 5000 children each year, and a River Clean-Up scheme which oversees volunteers in tidying up debris and litter. Helen finished her talk by pointing out that property development remains the river's greatest ongoing threat and appealed to ENHS members to support the conservation work of the trust in order to preserve the city's 'ribbon of green'.
www.waterofleith.org.uk
HB

21st November BUTTERFLIES of SCOTLAND and BULGARIA *Paul Kirkland*

Paul gave us interesting talk with lovely photos. He is writing an article for next year's Journal.

12th December CHRISTMAS PARTY

This was a very successful evening with lovely food and Natalie's Christmas cake. We had displays of photographs both on the wall and on the computer.

BOOK REVIEW *Scottish Mammals* by Robin Hull, published by Birlinn

Elizabeth Farquharson

The Library has been given a copy of this new book. We thank Birlinn for donating a copy to the E.N.H.S.

The author, Robin Hull, who is retired general practitioner, spent much of his childhood in Scotland, and since retirement has returned to Scotland and lives in Strathtay. In the preface the author is autobiographical, outlining the many influences which fostered his interest in natural history.

The first section is mainly historical following the development of mammals from the beginning of time to the present day. Quotations are taken from many authors stretching from The Venerable Bede in AD 700, through the Statistical Accounts, Millais in 1905, to Attenborough in 1979. It makes fascinating reading and can be dipped into rather than being read straight through.

The next section devoted to individual species is also packed with quotations, folklore and superstitions and is very good historically. However it is short on up-to-date information on distribution and density, and omits two mammals which one would have expected to be included. Soay sheep have been living wild for many generations on one of the St. Kilda group of island; and goats, of which there are a number of herds living wild throughout Scotland.

The book closes with thoughts on the future, and the effect which Man and climate change will have on our Scottish Mammals.

THE SOCIETY'S LIBRARY

I usually attend the winter indoor meetings and bring along a small selection of books to show and lend. Any member wishing to borrow a particular volume should ring me 7 days prior to the meeting. At other times, or if a book is required urgently, please make contact and we may be able to work something out. Members wishing a copy of the catalogue can ring me for one - cost : £1.50 + Postage. (or free by e-mail).

John Watson Librarian Tel: 0131 449 3693 ; *e-mail :* watsons@currie95.fsnet.co.uk

ACKNOWLEDGEMENTS

The Editors thank Elizabeth Farquharson, Jackie Muscott and Margaret Perry for proof reading.We must also thank Jackie Muscott and Eric Perry for their lovely drawings, which greatly enhance the text.

Ena Gillespie has taken on the task of sorting and organising all the photos this year. Many thanks to her.

We are sure that you will all agree that the photographs are lovely. The people we have to thank are:

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Teatime at Bute	Margaret Perry
Birding on Bute	Ian McCallum
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Geology Lesson	Ian McCallum
Master Class	Neville Crowther
Heads Down	Ian McCallum

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Marbled Beauty	Neville Crowther
Aphids feeding	Neville Crowther
Bristle Tails	Neville Crowther
Wood Tiger Moth	Neville Crowther
Treble Bar Moth	John Watson
Yellow Horned Poppy	Ena Gillespie
Forest Shield Bug	Neville Crowther

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N. Brown Argus eggs	Joanie Fairlie
Bombus terrestris	Roger Holme
Grass of Parnassus	Roger Holme
Bird s-foot	Roger Holme
Colonial Sea Squirt	Ena Gillespie

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George McDougall	Dorothy Stuart
Tom and the Epipactis	John Watson
Neville with net	Joanie Fairlie
Purple Oxytropis	John Watson
Strange Owls	Neville Crowther
Trailing Azalea	Roger Holme
Wood Vetch	Roger Holme
Chequered Skipper	Roger Holme
Small Argent Moth	Roger Holme
Light Emerald Moth	John Watson

Well over 40 people write articles, do outing reports and send us observations. We are very grateful for these contributions to the Journal.

If you wish you can e-mail your contribution to **journal@edinburghnaturalhistorysociety.org.uk** If you do not have e-mail, you can send e-mails from any Library, and there is usually a Librarian on hand to help you.

Otherwise, give your contribution to Sandra Stewart or Lyn Blades with outing reports to Lyn, please.

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THE SOCIETY'S EQUIPMENT

In addition to books held in the Library, the Society has various other items which can be borrowed by members for their private use, including LP records of birdsong with accompanying booklet, and a recording of Grasshoppers.

Needless to say, members will be responsible for the care of books and equipment on loan.

Telescope:	A Bushnell Spacemaster of 20x - 40x magnification, in carrying case and a car window-mount for in-car use. Apply to Grace Jamieson , Tel: 0131 453 3434
Microscopes:	High and low power microscopes. Apply to Margaret Perry (Tel. 0131 447 3515)
pH Meter:	Apply to Elizabeth Farquharson (Tel. 0131 447 1994)
Mammal Traps:	Twenty-four small-mammal traps. Apply to Elizabeth Farquharson (Tel: 0131 447 1994)
Photographic slides:	A comprehensive slide collection left to the Society by Janet Raeburn. The subjects are mostly botanical but also include birds, mammals, butterflies and Scottish scenery. They are kept in the Library.
Bawsinch Key:	The Bawsinch Nature Reserve at Duddingston is managed by the SWT, who allow the Society to hold a key for members. Apply to Joanie Fairlie, Secretary Tel.: 0131 477 0270
Computer Scanner:	Apply to Sandra Stewart (Tel: 0131 441 2641)
Overhead Projector:	Apply to Betty Smith (Tel: 0131 440 0888)
Slide Projector:	Apply to Elizabeth Farquharson (Tel. 0131 447 1994)

Laptop Computer and Data Projector Apply to Joanie Fairlie, Secretary Tel.: 0131 477 0270